

BID PROPOSAL INSTRUCTIONS

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

PREQUALIFICATION

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

WHO CAN BID ?

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

REQUESTS FOR AUTHORIZATION TO BID

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

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?

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

ABOUT AUTHORIZATION TO BID

Firms that have not received an Authorization to Bid or Not For Bid Report within a reasonable time of complete and correct original document submittal should contact the Department as to the status. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

ADDENDA AND REVISIONS

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

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

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

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

STANDARD GUIDELINES FOR SUBMITTING BIDS

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

BID SUBMITTAL CHECKLIST

- Cover page** (the sheet that has the item number on it) – This should be the first page of your bid proposal, **followed by your bid (the Schedule of Prices/Pay Items)**. If you are using special software or CBID to generate your schedule of prices, do not include the blank pages of the schedule of prices that came with the proposal package.
- Page 4 (Item 9)** – Check “YES” if you will use a subcontractor(s) with an annual value over \$50,000. Include the subcontractor(s) name, address, general type of work to be performed and the dollar amount. If you will use subcontractor(s) but are uncertain who or the dollar amount; check “YES” but leave the lines blank.
- After page 4** – Insert the following documents: 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. Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.
- Page 11 (Paragraph L)** – A copy of your State Board of Elections certificate of registration is no longer required with your bid.
- Page 11 (Paragraph M)** – Indicate if your company has hired a lobbyist in connection with the job for which you are submitting the bid proposal.
- Page 12 (Paragraph C)** – This is a work sheet to determine if a completed Form A is required. It is not part of the form and you do not need to make copies for each completed Form A.
- Pages 14-17 (Form A)** – One Form A (4 pages) is required for each applicable person in your company. Copies of the forms can be used and only need to be changed when the information changes. The certification signature and date must be original for each letting. **Do not staple the forms together.** If you answered “NO” to all of the questions in Paragraph C (page 12), complete the first section (page 14) with your company information and then sign and date the Not Applicable statement on page 17.
- Page 18 (Form B)** - If you check “YES” to having other current or pending contracts it is acceptable to use the phrase, “See Affidavit of Availability on file”. **Ownership Certification** (at the bottom of the page) - Check N/A if the Form A(s) you submitted accounts for 100 percent of the company ownership. Check YES if any percentage of ownership falls outside of the parameters that require reporting on the Form A. Checking NO indicates that the Form A(s) you submitted is not correct and you will be required to submit a revised Form A.
- Page 20 (Workforce Projection)** – Be sure to include the Duration of the Project. It is acceptable to use the phrase “Per Contract Specifications”.

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

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

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

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

QUESTIONS: pre-letting up to execution of the contract

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

QUESTIONS: following contract execution

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

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RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting September 19, 2014

NOTICE TO PROSPECTIVE BIDDERS

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

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL

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



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 63859
KANE County
Section 08-00278-00-BR (Aurora)
Route OHIO STREET
Project BRM-9003(165)
District 1 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

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

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

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RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____

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

**Contract No. 63859
KANE County
Section 08-00278-00-BR (Aurora)
Project BRM-9003(165)
Route OHIO STREET
District 1 Construction Funds**

This project consists of the removal of the existing structure and construction of a five-span steel girder and rolled beam structure including roadway construction and widening, pavement removal, earth and furnished excavation, curb & gutter removal and replacement, retaining walls, guardrail, storm sewer, drainage adjustment, landscaping and striping from Rural Street to Indian Avenue over the BNSF Railroad and Indian Creek in the City of Aurora.

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

RETURN WITH BID

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices will govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **AUTHORITY TO DO BUSINESS IN ILLINOIS.** Section 20-43 of the Illinois Procurement Code (the Code) (30 ILCS 500/20-43) provides that a person (other than an individual acting as a sole proprietor) must be a legal entity authorized to do business in the State of Illinois prior to submitting the bid.
9. **EXECUTION OF CONTRACT:** The Department of Transportation will, in accordance with the rules governing Department procurements, execute the contract and shall be the sole entity having the authority to accept performance and make payments under the contract. Execution of the contract by the Chief Procurement Officer (CPO) or the State Purchasing Officer (SPO) is for approval of the procurement process and execution of the contract by the Department. Neither the CPO nor the SPO shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Code.
10. **The services of a subcontractor will be used.**

Check box Yes
 Check box No

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

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
KANE	089	01	08-00278-00-BR (AURORA)	BRM-9003/165/000	OHIO STREET

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2002920	T-CELTIS OCCID 2-1/2	EACH	2.000 X	=	=	=	=
A2006520	T-QUERCUS BICOL 2-1/2	EACH	2.000 X	=	=	=	=
K0029634	WEED CONTR PRE-EM GRN	POUND	5.000 X	=	=	=	=
XX008021	REM EX ST ARCH & WGWL	EACH	1.000 X	=	=	=	=
XX008570	F&E PC PANELS STR 1	L SUM	1.000 X	=	=	=	=
XZ127900	RETAINING WALL REMOV	FOOT	26.000 X	=	=	=	=
X0321963	MICRO-PILES	EACH	20.000 X	=	=	=	=
X0323433	MIC-PIL PRF LOAD TEST	EACH	1.000 X	=	=	=	=
X0323814	SAN SEW REMOV 18	FOOT	320.000 X	=	=	=	=
X0324058	OUTLET SPL	EACH	8.000 X	=	=	=	=
X0324894	WM MANHOLES ADJ	EACH	1.000 X	=	=	=	=
X0326659	CUR-IN-PL PIPE LNR 18	FOOT	165.000 X	=	=	=	=
X0327131	DRAIN STRUCTURES N1	EACH	1.000 X	=	=	=	=
X0327132	DRAIN STRUCTURES N2	EACH	1.000 X	=	=	=	=
X0327357	CONSTRN VBRN MONITRNG	L SUM	1.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0487700	SAN SEW REMOV 10	FOOT	5.000 X	=	=	=	=
X4021000	TEMP ACCESS- PRIV ENT	EACH	5.000 X	=	=	=	=
X4022000	TEMP ACCESS- COM ENT	EACH	3.000 X	=	=	=	=
X4060110	BIT MATLS PR CT	POUND	13,575.000 X	=	=	=	=
X4810200	AGGREGATE SHLD REMOVL	CU YD	476.000 X	=	=	=	=
X5210150	HLMR BRG GUID EXP 400	EACH	10.000 X	=	=	=	=
X5538200	SS CLEANED 24	FOOT	28.000 X	=	=	=	=
X5610708	WATER MAIN REMOV 8	FOOT	70.000 X	=	=	=	=
X5610712	WATER MAIN REMOV 12	FOOT	31.000 X	=	=	=	=
X5610716	WATER MAIN REMOV 16	FOOT	107.000 X	=	=	=	=
X5630012	CUT & CAP EX 12 WM	EACH	6.000 X	=	=	=	=
X6022810	MAN SAN 4 DIA T1F CL	EACH	5.000 X	=	=	=	=
X6026050	SANITARY MANHOLE ADJ	EACH	3.000 X	=	=	=	=
X6026054	SAN MAN REMOVED	EACH	3.000 X	=	=	=	=
X6026622	VV REMOVED	EACH	2.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X6026632	VALVE BOX REMOVED	EACH	2.000 X	=	=	=	=
X6330705	RUB RAIL	FOOT	119.000 X	=	=	=	=
X7010216	TRAF CONT & PROT SPL	L SUM	1.000 X	=	=	=	=
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X	=	=	=	=
Z0018500	DRAINAGE STR CLEANED	EACH	1.000 X	=	=	=	=
Z0022800	FENCE REMOVAL	FOOT	308.000 X	=	=	=	=
Z0026407	TEMP SHT PILING	SQ FT	2,055.000 X	=	=	=	=
Z0034210	MECH ST EARTH RET WL	SQ FT	8,890.000 X	=	=	=	=
Z0046304	P UNDR FOR STRUCT 4	FOOT	937.000 X	=	=	=	=
Z0048665	RR PROT LIABILITY INS	L SUM	1.000 X	=	=	=	=
Z0050600	REM RESET ORN FENCE	FOOT	682.000 X	=	=	=	=
Z0056668	SS 2 WAT MN 12	FOOT	275.000 X	=	=	=	=
Z0056669	SS 2 WAT MN 15	FOOT	32.000 X	=	=	=	=
Z0057000	SAN SEW 10	FOOT	10.000 X	=	=	=	=
Z0057300	SAN SEW 18	FOOT	351.000 X	=	=	=	=

OHIO
08-00278-00-BR (AURORA)
KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63859

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RUN TIME - 183116

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0065704	BIT CT AG SLOPEWALL 6	SQ YD	730.000 X				
Z0076600	TRAINEES	HOUR	1,000.000 X	0.80		800.00	
Z0076604	TRAINEES TPG	HOUR	1,000.000 X	15.00		15,000.00	
20100110	TREE REMOV 6-15	UNIT	653.000 X				
20100210	TREE REMOV OVER 15	UNIT	123.000 X				
20101000	TEMPORARY FENCE	FOOT	675.000 X				
20101200	TREE ROOT PRUNING	EACH	75.000 X				
20101300	TREE PRUN 1-10	EACH	50.000 X				
20101350	TREE PRUN OVER 10	EACH	25.000 X				
20200100	EARTH EXCAVATION	CU YD	2,791.000 X				
20201200	REM & DISP UNS MATL	CU YD	452.000 X				
20400800	FURNISHED EXCAVATION	CU YD	5,394.000 X				
20800150	TRENCH BACKFILL	CU YD	1,945.000 X				
21101615	TOPSOIL F & P 4	SQ YD	5,508.000 X				
21301072	EXPLOR TRENCH 72	FOOT	100.000 X				

OHIO
 08-00278-00-BR (AURORA)
 KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63859

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 RUN DATE - 07/23/14
 RUN TIME - 183116

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
25000400	NITROGEN FERT NUTR	POUND	75.000 X	=			
25000600	POTASSIUM FERT NUTR	POUND	75.000 X	=			
25000750	MOWING	ACRE	17.500 X	=			
25100630	EROSION CONTR BLANKET	SQ YD	4,845.000 X	=			
25100635	HD EROS CONTR BLANKET	SQ YD	2,050.000 X	=			
25200110	SODDING SALT TOLERANT	SQ YD	6,358.000 X	=			
25200200	SUPPLE WATERING	UNIT	314.000 X	=			
28000250	TEMP EROS CONTR SEED	POUND	750.000 X	=			
28000305	TEMP DITCH CHECKS	FOOT	24.000 X	=			
28000400	PERIMETER EROS BAR	FOOT	3,210.000 X	=			
28000500	INLET & PIPE PROTECT	EACH	6.000 X	=			
28000510	INLET FILTERS	EACH	29.000 X	=			
28100111	STONE RIPRAP CL A6	SQ YD	232.000 X	=			
28200200	FILTER FABRIC	SQ YD	257.000 X	=			
30300001	AGG SUBGRADE IMPROVE	CU YD	50.000 X	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CENTS
30300112	AGG SUBGRADE IMPR 12	SQ YD	6,223.000 X	=		=	
35101600	AGG BASE CSE B 4	SQ YD	1,390.000 X	=		=	
35101800	AGG BASE CSE B 6	SQ YD	970.000 X	=		=	
40600982	HMA SURF REM BUTT JT	SQ YD	209.000 X	=		=	
40603080	HMA BC IL-19.0 N50	TON	2,765.000 X	=		=	
40603335	HMA SC "D" N50	TON	623.000 X	=		=	
42001165	BR APPR PAVT	SQ YD	200.000 X	=		=	
42001300	PROTECTIVE COAT	SQ YD	1,122.000 X	=		=	
42300200	PCC DRIVEWAY PAVT 6	SQ YD	562.000 X	=		=	
42300400	PCC DRIVEWAY PAVT 8	SQ YD	128.000 X	=		=	
42400200	PC CONC SIDEWALK 5	SQ FT	2,924.000 X	=		=	
42400300	PC CONC SIDEWALK 6	SQ FT	3,358.000 X	=		=	
42400800	DETECTABLE WARNINGS	SQ FT	180.000 X	=		=	
44000100	PAVEMENT REM	SQ YD	5,269.000 X	=		=	
44000200	DRIVE PAVEMENT REM	SQ YD	700.000 X	=		=	

OHIO
08-00278-00-BR (AURORA)
KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63859

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
44000500	COMB CURB GUTTER REM	FOOT	1,501.000 X	=	=	=	=
44000600	SIDEWALK REM	SQ FT	10,048.000 X	=	=	=	=
48101500	AGGREGATE SHLDS B 6	SQ YD	79.000 X	=	=	=	=
48203021	HMA SHOULDERS 6	SQ YD	60.000 X	=	=	=	=
50100100	REM EXIST STRUCT	EACH	1.000 X	=	=	=	=
50105220	PIPE CULVERT REMOV	FOOT	62.000 X	=	=	=	=
50200100	STRUCTURE EXCAVATION	CU YD	2,937.000 X	=	=	=	=
50300225	CONC STRUCT	CU YD	429.000 X	=	=	=	=
50300255	CONC SUP-STR	CU YD	1,054.000 X	=	=	=	=
50300260	BR DECK GROOVING	SQ YD	1,348.000 X	=	=	=	=
50300285	FORM LINER TEX SURF	SQ FT	6,476.000 X	=	=	=	=
50300300	PROTECTIVE COAT	SQ YD	2,944.000 X	=	=	=	=
50500105	F & E STRUCT STEEL	L SUM	1.000 X	=	=	=	=
50500505	STUD SHEAR CONNECTORS	EACH	11,340.000 X	=	=	=	=
50800205	REINF BARS, EPOXY CTD	POUND	272,800.000 X	=	=	=	=

OHIO
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ILLINOIS DEPARTMENT OF TRANSPORTATION
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RUN TIME - 183116

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
50800515	BAR SPLICERS	EACH	80.000 X	=	=	=	=
50901720	BICYCLE RAILING	FOOT	430.000 X	=	=	=	=
50901730	BRIDGE FENCE RAILING	FOOT	689.000 X	=	=	=	=
50901750	PARAPET RAILING	FOOT	738.000 X	=	=	=	=
51201800	FUR STL PILE HP14X73	FOOT	3,028.000 X	=	=	=	=
51202305	DRIVING PILES	FOOT	3,028.000 X	=	=	=	=
51203800	TEST PILE ST HP14X73	EACH	4.000 X	=	=	=	=
51500100	NAME PLATES	EACH	1.000 X	=	=	=	=
52100010	ELAST BEARING ASSY T1	EACH	10.000 X	=	=	=	=
52100020	ELAST BEARING ASSY T2	EACH	10.000 X	=	=	=	=
52100505	ANCHOR BOLTS 5/8	EACH	20.000 X	=	=	=	=
52100510	ANCHOR BOLTS 3/4	EACH	40.000 X	=	=	=	=
52100520	ANCHOR BOLTS 1	EACH	20.000 X	=	=	=	=
54215472	CIP RC END SEC 72	EACH	1.000 X	=	=	=	=
54260311	TRAVERS PIPE GRATE	FOOT	84.000 X	=	=	=	=

OHIO
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CONTRACT NUMBER - 63859

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RUN DATE - 07/23/14
RUN TIME - 183116

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
54261278	CONC ES 542001 78 1:2	EACH	1.000 X				
550A0340	STORM SEW CL A 2 12	FOOT	283.000 X				
550A0360	STORM SEW CL A 2 15	FOOT	53.000 X				
550A0380	STORM SEW CL A 2 18	FOOT	106.000 X				
550A0410	STORM SEW CL A 2 24	FOOT	405.000 X				
550A0500	STORM SEW CL A 2 60	FOOT	48.000 X				
550A0520	STORM SEW CL A 2 72	FOOT	259.000 X				
550A0530	STORM SEW CL A 2 78	FOOT	313.000 X				
55100300	STORM SEWER REM 8	FOOT	16.000 X				
55100500	STORM SEWER REM 12	FOOT	235.000 X				
55100900	STORM SEWER REM 18	FOOT	90.000 X				
55101200	STORM SEWER REM 24	FOOT	348.000 X				
55101800	STORM SEWER REM 42	FOOT	33.000 X				
56103300	D I WATER MAIN 12	FOOT	166.000 X				
56103350	D I WATER MAIN 14	FOOT	240.000 X				

OHIO
08-00278-00-BR (AURORA)
KANE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63859

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RUN DATE - 07/23/14
RUN TIME - 183116

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
56103400	D I WATER MAIN 16	FOOT	430.000 X	=	=	=	=
56400300	FIRE HYDNTS TO BE ADJ	EACH	3.000 X	=	=	=	=
56400600	FIRE HYDRANTS	EACH	1.000 X	=	=	=	=
59100100	GEOCOMPOSITE WALL DR	SQ YD	81.000 X	=	=	=	=
60104500	PIPE DRAINS CS 48	FOOT	5.000 X	=	=	=	=
60200805	CB TA 4 DIA T8G	EACH	5.000 X	=	=	=	=
60201110	CB TA 4 DIA T11V F&G	EACH	15.000 X	=	=	=	=
60218400	MAN TA 4 DIA T1F CL	EACH	4.000 X	=	=	=	=
60221100	MAN TA 5 DIA T1F CL	EACH	4.000 X	=	=	=	=
60223800	MAN TA 6 DIA T1F CL	EACH	1.000 X	=	=	=	=
60224459	MAN TA 8 DIA T1F CL	EACH	1.000 X	=	=	=	=
60224469	MAN TA 9 DIA T1F CL	EACH	3.000 X	=	=	=	=
60224470	MAN TA 9 DIA T1F OL	EACH	3.000 X	=	=	=	=
60236825	INLETS TA T11V F&G	EACH	11.000 X	=	=	=	=
60248900	VV TA 5 DIA T1F CL	EACH	5.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60266600	VALVE BOX ADJ	EACH	8.000 X	=	=	=	=
60500040	REMOV MANHOLES	EACH	3.000 X	=	=	=	=
60500050	REMOV CATCH BAS	EACH	4.000 X	=	=	=	=
60500060	REMOV INLETS	EACH	7.000 X	=	=	=	=
60603800	COMB CC&G TB6.12	FOOT	2,577.000 X	=	=	=	=
63000005	SPBGR TY B	FOOT	112.500 X	=	=	=	=
63100045	TRAF BAR TERM T2	EACH	1.000 X	=	=	=	=
63100070	TRAF BAR TERM T5	EACH	1.000 X	=	=	=	=
63100085	TRAF BAR TERM T6	EACH	1.000 X	=	=	=	=
63100167	TR BAR TRM T1 SPL TAN	EACH	3.000 X	=	=	=	=
63200310	GUARDRAIL REMOV	FOOT	803.000 X	=	=	=	=
66400305	CH LK FENCE 6	FOOT	207.000 X	=	=	=	=
66900200	NON SPL WASTE DISPOSL	CU YD	536.000 X	=	=	=	=
67000400	ENGR FIELD OFFICE A	CAL MO	12.000 X	=	=	=	=
67100100	MOBILIZATION	L SUM	1.000 X	=	=	=	=

OHIO
08-00278-00-BR (AURORA)
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ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63859

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RUN DATE - 07/23/14
RUN TIME - 183116

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
70106800	CHANGEABLE MESSAGE SN	CAL MO	8.000 X		=		
70300100	SHORT TERM PAVT MKING	FOOT	634.000 X		=		
72000100	SIGN PANEL T1	SQ FT	113.000 X		=		
72400310	REMOV SIGN PANEL T1	SQ FT	116.000 X		=		
72900200	METAL POST TY B	FOOT	122.000 X		=		
78000200	THPL PVT MK LINE 4	FOOT	4,095.000 X		=		
78000400	THPL PVT MK LINE 6	FOOT	1,221.000 X		=		
78000600	THPL PVT MK LINE 12	FOOT	125.000 X		=		
78000650	THPL PVT MK LINE 24	FOOT	95.000 X		=		
78006110	PREF THPL PM LINE 4	FOOT	808.000 X		=		
78200410	GUARDRAIL MKR TYPE A	EACH	12.000 X		=		
78201000	TERMINAL MARKER - DA	EACH	3.000 X		=		
81028240	UNDRGRD C GALVS 4	FOOT	280.000 X		=		
81101000	CON AT ST 4 GALVS	FOOT	730.000 X		=		
81400200	HD HANDHOLE	EACH	2.000 X		=		

TOTAL \$

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

OHIO
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ILLINOIS DEPARTMENT OF TRANSPORTATION
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NOTE:

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

RETURN WITH BID

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

I. GENERAL

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

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

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for the CPO to void the contract, and may result in the suspension or debarment of the bidder or subcontractor. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

I acknowledge, understand and accept these terms and conditions.

II. ASSURANCES

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

A. **Conflicts of Interest**

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

RETURN WITH BID

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

B. Negotiations

Section 50-15. Negotiations.

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

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

C. Inducements

Section 50-25. Inducement.

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

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

D. Revolving Door Prohibition

Section 50-30. Revolving door prohibition.

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

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

E. Reporting Anticompetitive Practices

Section 50-40. Reporting anticompetitive practices.

When, for any reason, any vendor, bidder, contractor, CPO, SPO, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offerors, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the CPO.

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

F. Confidentiality

Section 50-45. Confidentiality.

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

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

RETURN WITH BID

G. Insider Information

Section 50-50. Insider information.

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

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

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

III. CERTIFICATIONS

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

A. Bribery

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 2012.

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

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

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

B. Felons

Section 50-10. Felons.

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

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

RETURN WITH BID

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

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

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

E. Section 42 of the Environmental Protection Act

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

F. Educational Loan

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

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

G. Bid-Rigging/Bid Rotating

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

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

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

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

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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.

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

H. International Anti-Boycott

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

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

I. Drug Free Workplace

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

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

J. Disclosure of Business Operations in Iran

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

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

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

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

Check the appropriate statement:

Company has no business operations in Iran to disclose.

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

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

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

NA-FEDERAL

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

RETURN WITH BID

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

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

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

The undersigned bidder certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. If the business entity is required to register, the CPO shall verify that it is in compliance on the date the bid or proposal is due. The CPO shall not accept a bid or proposal if the business entity is not in compliance with the registration requirements.

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

M. Lobbyist Disclosure

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

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

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

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

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

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

Or

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

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

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

RETURN WITH BID

IV. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

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

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

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

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

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

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

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

RETURN WITH BID

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

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

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

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

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

RETURN WITH BID

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

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

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

Disclosure of the information contained in this Form is required by 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 aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes ___ No ___

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

Yes ___ No ___

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___
2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____
-
3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess 100% of the annual salary of the Governor? Yes ___ No ___
4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes ___ No ___

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

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

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

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

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

RETURN WITH BID

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

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

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

3. Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH BID

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

Completed by: _____
Signature of Individual or Authorized Representative Date

NOT APPLICABLE STATEMENT

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

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

Signature of Authorized Representative Date

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Financial Related Information Disclosure

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

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

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature of Authorized Representative, Date

OWNERSHIP CERTIFICATION

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

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

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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

RETURN WITH BID

**Contract No. 63859
KANE County
Section 08-00278-00-BR (Aurora)
Project BRM-9003(165)
Route OHIO STREET
District 1 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____ Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

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

RETURN WITH BID

ADDITIONAL FEDERAL REQUIREMENTS

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

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

RETURN WITH BID

**Contract No. 63859
KANE County
Section 08-00278-00-BR (Aurora)
Project BRM-9003(165)
Route OHIO STREET
District 1 Construction Funds**

PROPOSAL SIGNATURE SHEET

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

(IF AN INDIVIDUAL)

Firm Name _____
Signature of Owner _____
Business Address _____

(IF A CO-PARTNERSHIP)

Firm Name _____
By _____
Business Address _____
Name and Address of All Members of the Firm: _____

(IF A CORPORATION)

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

(IF A JOINT VENTURE)

Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____
Attest _____
Signature _____
Business Address _____

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



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

KNOW ALL PERSONS BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

as SURETY, and held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in the bid proposal under "Proposal Guaranty" in effect on the date of the Invitation for Bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that whereas, the PRINCIPAL may submit bid proposal(s) to the STATE OF ILLINOIS, acting through the Department of Transportation, for various improvements published in the Transportation Bulletin during the effective term indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal(s) of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

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

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

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

(Company Name)

(Company Name)

By _____
(Signature and Title)

By _____
(Signature of Attorney-in-Fact)

Notary for PRINCIPAL

Notary for SURETY

STATE OF _____
COUNTY OF _____

STATE OF _____
COUNTY OF _____

Signed and attested before me on _____ (date)

Signed and attested before me on _____ (date)

by _____
(Name of Notary Public)

by _____
(Name of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

(Date Commission Expires)

In lieu of completing the above section of the Annual Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal(s) the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid bond as shown above.

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

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



Item No. _____

Letting Date _____

KNOW ALL PERSONS BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

as SURETY, and held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in the bid proposal under "Proposal Guaranty" in effect on the date of the Invitation for Bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that whereas, the PRINCIPAL has submitted a bid proposal to the STATE OF ILLINOIS, acting through the Department of Transportation, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

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

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

(Company Name)

By _____
(Signature and Title)

Notary for PRINCIPAL

STATE OF _____
COUNTY OF _____

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

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

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

(Company Name)

By _____
(Signature of Attorney-in-Fact)

Notary for SURETY

STATE OF _____
COUNTY OF _____

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

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

In lieu of completing the above section of the Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid bond as shown above.

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

(1) Policy

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

(2) Obligation

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

(3) Project and Bid Identification

Complete the following information concerning the project and bid:

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

(4) Assurance

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

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

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

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

Disadvantaged Business Participation _____ percent

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

Company

By _____

Title _____

Date _____

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

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

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

Local Let Projects
Submit forms to the
Local Agency

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. 63859
KANE County
Section 08-00278-00-BR (Aurora)
Project BRM-9003(165)
Route OHIO STREET
District 1 Construction Funds**



Illinois Department of Transportation

SUBCONTRACTOR DOCUMENTATION

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

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

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

RETURN WITH SUBCONTRACT

STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

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

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

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

A. Bribery

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract to which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 2012.

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

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

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

B. Felons

Section 50-10. Felons.

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

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

RETURN WITH SUBCONTRACT

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

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

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

E. Section 42 of the Environmental Protection Act

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

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

<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 State Toll Highway Authority?
Yes ___ No ___

2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of your spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____

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

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

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

3 Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH SUBCONTRACT

4. 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. This Form B must be completed for subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature box with fields: Signature of Authorized Officer, Date

OWNERSHIP CERTIFICATION

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

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

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



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation. Electronic bids are to be submitted to the electronic bidding system (ics-Integrated Contractors Exchange). Paper-based bids are to be submitted to the Chief Procurement Officer for the Department of Transportation in care of the Chief Contracts Official at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m. September 19, 2014. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 63859
KANE County
Section 08-00278-00-BR (Aurora)
Project BRM-9003(165)
Route OHIO STREET
District 1 Construction Funds**

This project consists of the removal of the existing structure and construction of a five-span steel girder and rolled beam structure including roadway construction and widening, pavement removal, earth and furnished excavation, curb & gutter removal and replacement, retaining walls, guardrail, storm sewer, drainage adjustment, landscaping and striping from Rural Street to Indian Avenue over the BNSF Railroad and Indian Creek in the City of Aurora.

- 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

Erica J. Borggren,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2014

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

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

SUPPLEMENTAL SPECIFICATIONS

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LR SD12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR SD406		<input type="checkbox"/> RESCINDED		
LR 102-2		<input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals	Jan. 1, 2001	Jan. 1, 2014
LR 105	168	<input checked="" type="checkbox"/> Cooperation with Utilities	Jan. 1, 1999	Jan. 1, 2007
LR 107-2		<input type="checkbox"/> Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-4	171	<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. 1, 2014
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 109		<input type="checkbox"/> Equipment Rental Rates	Jan. 1, 2012	
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Bituminous Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Apr. 1, 2012
LR 400-2		<input type="checkbox"/> Bituminous Surface Plant Mix (Class B)	Jan. 1, 2008	
LR 400-3		<input type="checkbox"/> Hot In-Place Recycling (HIR) – Surface Recycling	Jan. 1, 2012	
LR 400-4		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-5		<input type="checkbox"/> Cold In-Place Recycling (CIR) With Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-6		<input type="checkbox"/> Cold In Place Recycling (CIR) with Foamed Asphalt	June 1, 2012	
LR 400-7		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Foamed Asphalt	June 1, 2012	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-1		<input type="checkbox"/> Surface Profile Milling of Existing, Recycled or Reclaimed Flexible Pavement	Apr. 1, 2012	Jun. 1, 2012
LR 403-2		<input type="checkbox"/> Bituminous Hot Mix Sand Seal Coat	Aug. 1, 1969	Jan. 1, 2007
LR 406		<input type="checkbox"/> Filling HMA Core Holes with Non-shrink Grout	Jan. 1, 2008	
LR 420		<input type="checkbox"/> PCC Pavement (Special)	May 12, 1964	Jan. 2, 2007
LR 442		<input type="checkbox"/> Bituminous Patching Mixtures for Maintenance Use	Jan. 1, 2004	Jun. 1, 2007
LR 451		<input type="checkbox"/> Crack Filling Bituminous Pavement with Fiber-Asphalt	Oct. 1, 1991	Jan. 1, 2007
LR 503-1		<input type="checkbox"/> Furnishing Class SI Concrete	Oct. 1, 1973	Jan. 1, 2002
LR 503-2		<input type="checkbox"/> Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		<input type="checkbox"/> Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		<input type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1000-1		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures	Apr. 1, 2012	Jun. 1, 2012
LR 1000-2		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures	June 1, 2012	
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		<input type="checkbox"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the August 1 and September 19, 2014 Lettings

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

<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80240		Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099		Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
80274		Aggregate Subgrade Improvement	April 1, 2012	Jan. 1, 2013
80192	172	X 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	
50261		Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481		Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491		Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531		Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80292	174	X Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	April 1, 2013
* 80310		Coated Galvanized Steel Conduit	Jan. 1, 2013	Aug. 1, 2014
* 80341		Coilable Nonmetallic Conduit	Aug. 1, 2014	
80198		Completion Date (via calendar days)	April 1, 2008	
80199		Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293		Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	April 1, 2014
80294		Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	April 1, 2012	April 1, 2014
80311	175	X Concrete End Sections for Pipe Culverts	Jan. 1, 2013	
* 80334	177	X Concrete Gutter, Curb, Median, and Paved Ditch	April 1, 2014	Aug. 1, 2014
80277		Concrete Mix Design – Department Provided	Jan. 1, 2012	Jan. 1, 2014
80261	178	X Construction Air Quality – Diesel Retrofit	June 1, 2010	Jan. 1, 2014
80335	181	X Contract Claims	April 1, 2014	
80029	182	X Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80265		Friction Aggregate	Jan. 1, 2011	
80229		Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80329		Glare Screen	Jan. 1, 2014	
80303	192	X Granular Materials	Nov. 1, 2012	
* 80304		Grooving for Recessed Pavement Markings	Nov. 1, 2012	Aug. 1, 2014
80246	193	X Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80322		Hot-Mix Asphalt – Mixture Design Composition and Volumetric Requirements	Nov 1, 2013	
80323		Hot-Mix Asphalt – Mixture Design Verification and Production	Nov 1, 2013	
80315		Insertion Lining of Culverts	Jan. 1, 2013	Nov 1, 2013
80336		Longitudinal Joint and Crack Patching	April 1, 2014	
80324		LRFD Pipe Culvert Burial Tables	Nov 1, 2013	April 1, 2014
80325	195	X LRFD Storm Sewer Burial Tables	Nov 1, 2013	
* 80045		Material Transfer Device	June 15, 1999	Aug. 1, 2014
* 80342		Mechanical Side Tie Bar Inserter	Aug. 1, 2014	
80165		Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80337		Paved Shoulder Removal	April 1, 2014	
80330		Pavement Marking for Bike Symbol	Jan. 1, 2014	
80298		Pavement Marking Tape Type IV	April 1, 2012	
80254		Pavement Patching	Jan. 1, 2010	
80331	205	X Payrolls and Payroll Records	Jan. 1, 2014	
80332	207	X Portland Cement Concrete – Curing of Abutments and Piers	Jan. 1, 2014	
80326	208	X Portland Cement Concrete Equipment	Nov 1, 2013	

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80338			Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	April 1, 2014	
* 80343			Precast Concrete Handhole	Aug. 1, 2014	
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	
80328	209	X	Progress Payments	Nov. 2, 2013	
80281	210	X	Quality Control/Quality Assurance of Concrete Mixes	Jan. 1, 2012	Jan. 1, 2014
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	211	X	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80306			Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	April 1, 2014
80327	213	X	Reinforcement bars	Nov 1, 2013	
80283	215	X	Removal and Disposal of Regulated Substances	Jan. 1, 2012	Nov. 2, 2012
80319	219	X	Removal and Disposal of Surplus Materials	Nov. 2, 2012	
* 80344			Rigid Metal Conduit	Aug. 1, 2014	
80307			Seeding	Nov. 1, 2012	
* 80340			Speed Display Trailer	April 2, 2014	
80339			Stabilized Subbase	April 1, 2014	
80127			Steel Cost Adjustment	April 2, 2004	April 1, 2009
80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	
80301			Tracking the Use of Pesticides	Aug. 1, 2012	
80333			Traffic Control Setup and Removal Freeway/Expressway	Jan. 1, 2014	
20338	220	X	Training Special Provisions	Oct. 15, 1975	
80318	223	X	Traversable Pipe Grate	Jan. 1, 2013	April 1, 2014
* 80345			Underpass Luminaire	Aug. 1, 2014	
* 80346			Waterway Obstruction Warning Luminaire	Aug. 1, 2014	
80288	225	X	Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2013
80302	229	X	Weekly DBE Trucking Reports	June 2, 2012	
80289			Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071	230	X	Working Days	Jan. 1, 2002	

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

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

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

The following special provisions require additional information from the designer. The Special Provisions are:

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

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET

Effective as of the: June 13, 2014 Letting

Pg #	√	File Name	Title	Effective	Revised
		GBSP 4	Polymer Modified Portland Cement Mortar	June 7, 1994	July 26, 2013
		GBSP 12	Drainage System	June 10, 1994	Jan 1, 2007
231	X	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	April 18, 2014
		GBSP 21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	May 18, 2011
		GBSP 25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	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
237	X	GBSP 32	Temporary Sheet Piling	Sept 2, 1994	Jan 31, 2012
		GBSP 33	Pedestrian Truss Superstructure	Jan 13, 1998	April 18, 2014
		GBSP 34	Concrete Wearing Surface	June 23, 1994	Feb 6, 2013
		GBSP 35	Silicone Bridge Joint Sealer	Aug 1, 1995	Oct 15, 2011
239	X	GBSP 38	Mechanically Stabilized Earth Retaining Walls	Feb 3, 1999	April 18, 2014
		GBSP 42	Drilled Soldier Pile Retaining Wall	Sept 20, 2001	Jan 3, 2014
		GBSP 43	Driven Soldier Pile Retaining Wall	Nov 13, 2002	Jan 3, 2014
		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	July 26, 2013
248	X	GBSP 51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
		GBSP 53	Structural Repair of Concrete	Mar 15, 2006	April 18, 2014
		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	April 18, 2014
		GBSP 59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	Jan 3, 2014
		GBSP 60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	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	Jan 3, 2014
		GBSP 67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	
		GBSP 70	Braced Excavation	Aug 9, 1995	May 18, 2011
		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	
		GBSP 76	Granular Backfill for Structures	April 19, 2012	Oct 30, 2012
		GBSP 77	Weep Hole Drains for Abutments, Wingwalls, Retaining Walls And Culverts	April 19, 2012	Oct 22, 2013
249	X	GBSP 78	Bridge Deck Construction	Oct 22, 2013	April 18, 2014

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
GBSP11	Permanent Steel Sheet Piling	Replaced by GBSP74
GBSP47	High Performance Concrete Structures	Discontinued
GBSP52	Porous Granular Embankment (Special)	Replaced by GBSP76
GBSP66	Wave Equation Analysis of Piles	Discontinued

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2012 (hereinafter referred to as the Standard Specifications); the latest edition of the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways" in effect on the date of invitation for bids; the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids; and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein which apply to and govern the construction of Ohio Street within the City of Aurora, and in case of conflict with any part of parts of said specifications, the said Special Provisions shall take precedence and shall govern.

Ohio Street
Indian Avenue to Rural Street
Section 08-00278-00-BR
Project No. BRM-9003(165)
City of Aurora
Kane County
Contract No. 63859

LOCATION OF PROJECT

This project begins at a point on the centerline of Ohio Street, at Station 103+53.66 and extends in a northerly direction for a distance of 1,620.84 feet (0.31 miles) to Station 119+74.50 in the City of Aurora, Kane County, Illinois.

DESCRIPTION OF PROJECT

The work consists of the removal and construction of a grade-separation structure of Ohio Street over the Burlington Northern Santa Fe (BNSF) Railroad. The work to be performed consists of roadway reconstruction and widening, pavement removal, earth excavation, furnished excavation, HMA pavement, curb and gutter, bridge construction, MSE retaining walls, guardrail, storm sewer and drainage structure adjustments and installation, sanitary sewers, water main, landscaping, striping and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

MAINTENANCE OF ROADWAYS

Effective: September 30, 1985

Revised: November 1, 1996

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

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

STATUS OF UTILITIES TO BE ADJUSTED

Effective: January 30, 1987

Revised: January 24, 2013

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

Name of Utility	Type	Location	Estimated Duration of Time for the Completion of Relocation or Adjustments
ComEd 2 Lincoln Centre Oak Brook, IL 60181 Attn: Ms. Ana Kunze (630) 437-2129	Overhead electric lines	Along entire project – on the west side of roadway.	60 days.
Nicor Gas 1844 Ferry Road Naperville, IL 60563-9600 Attn: Ms. Constance Lane (630) 388-3830	Underground gas main crossings	Along entire project excluding bridge limits	90 days
Comcast Cable Communications, Inc. Design/Drafting Department 688 Industrial Drive Elmhurst, IL 60126 Attn: Ms. Martha Gieras (630) 600-6352	Overhead cable TV lines	Along entire project – on the west side of roadway.	Relocation will not affect time. Relocation to take place within 10 days of substantial completion.
AT&T 1000 Commerce Drive Oak Brook, IL 60523-8810 Attn: Mr. Bob Elsinga (630)573-5452	Telephone	Along entire project – on the west side of roadway.	Relocation will not affect time. Relocation to take place within 10 days of substantial completion.

Name of Utility	Type	Location	Estimated Duration of Time for the Completion of Relocation or Adjustments
AT&T Long Distance 866 Rock Creek Road Plano, IL 60545-9571 Attn: Carl Donahue	Long Distance	Not within project limits	Not required
AT&T TCG 300 N Point Parkway Alpharetta, GA 30005-4116 Attn: Mr. Jim Everett	Telecommunications	Not within project limits	Not required
Verizon Business/MCI PO Box 387 7719 West 60 th Place Summitt, IL 60501 Attn: Mr. Jim Todd	Telecommunications	Not within project limits	Not required
City of Aurora 44 East Downer Place Aurora, IL 60507 Attn: Mr. Rick Munson (630) 256-3256	Underground water main & sanitary sewer	Along entire project	28 days
Fox Metro Water Reclamation District 682 State Route 31 Oswego, IL 60543 Attn: Ms. Sandra Medrano (630) 301-6806	Underground sanitary sewer	Along entire project	28 days

The above represents the best information available to the Department and is included for the convenience of the bidder. The applicable portions of Articles 105.07 and 107.31 of the Standard Specifications shall apply.

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

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

TRAFFIC CONTROL AND PROTECTION (ARTERIALS)

Effective: February 1, 1996

Revised: March 1, 2011

Specific traffic control plan details and Special Provisions have been prepared for this contract. This work shall include all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans.

Method of Measurement: All traffic control (except Traffic Control and Protection (Expressways)) and temporary pavement markings indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis.

Basis of Payment: All traffic control and protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Temporary pavement markings will be paid for separately unless shown on a Standard.

TRAFFIC CONTROL PLAN

Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and State Standards contained in the plans, and the Special Provisions contained herein.

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

The Contractor shall contact the District One Bureau of Traffic and the City of Aurora at least 72 hours in advance of beginning work.

STANDARDS

Special attention is called to the following State Standards related to traffic control:

701006-04 701011-04 701301-04 701501-06 701801-05 701901-03

DETAILS

Special attention is called to the details included in the Plans related to traffic control:

TC-10 Traffic Control and Protection for Side Roads, Intersections and Driveways
TC-13 District one Typical Pavement Markings
TC-26 Driveway Entrance Signing

SPECIAL PROVISIONS

Special attention is called to the following Special Provisions relating to traffic control:

BDE SPECIAL PROVISIONS: Traffic Control Deficiency Deduction

DISTRICT ONE SPECIAL PROVISIONS: Maintenance of Roadways
Traffic Control and Protection (Arterials)

RECURRING SPECIAL PROVISIONS: Guardrail and Barrier Wall Delineation
LRS 3 – Work Zone Traffic Control Surveillance
LRS 4 – Flaggers in Work Zones

ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

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

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

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

Revise Article 603.05 to read:

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

Revise Article 603.06 to read:

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

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

Revise the first sentence of Article 603.07 to read:

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

HOT-MIX ASPHALT – PRIME COAT (D-1)

Effective: February 19, 2013

Revised: April 1, 2014

Revise Note 1 of Article 406.02 of the Standard Specifications to read:

"Note 1. The bituminous material used for prime coat shall be one of the types listed in the following table.

When emulsified asphalts are used, any dilution with water shall be performed by the emulsion producer. The emulsified asphalt shall be thoroughly agitated within 24 hours of application and show no separation of water and emulsion.

Application	Bituminous Material Types
Prime Coat on Brick, Concrete, or HMA Bases	SS-1, SS-1h, SS-1hP, SS-1vh, CSS-1, CSS-1h, CSS-1hP, HFE-90, RC-70
Prime Coat on Aggregate Bases	MC-30, PEP"

Add the following to Article 406.03 of the Standard Specifications:

"(i) Regenerative Air Vacuum Sweeper.....1101.19"

Revise Article 406.05(b) of the Standard Specifications to read:

"(b) Prime Coat. The bituminous material shall be prepared according to Article 403.05 and applied according to Article 403.10. The use of RC-70 shall be limited to air temperatures less than 60 °F (15 °C)."

- (1) Brick, Concrete or HMA Bases. The base shall be cleaned of all dust, debris and any substance that will prevent the prime coat from adhering to the base. Cleaning shall be accomplished by sweeping to remove all large particles and air blasting to remove dust. As an alternate to air blasting, vacuum sweeping may be used to accomplish the dust removal. Vacuum sweeping shall be accomplished with a regenerative air vacuum sweeper. The base shall be free of standing water at the time of application. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface as specified in the following table.

Type of Surface to be Primed	Residual Asphalt Rate lb/sq ft (kg/sq m)
Milled HMA, Aged Non-Milled HMA, Milled Concrete, Non-Milled Concrete & Tined Concrete	0.05 (0.244)
Fog Coat between HMA Lifts, IL-4.75 & Brick	0.025 (0.122)

The bituminous material for the prime coat shall be placed one lane at a time. The primed lane shall remain closed until the prime coat is fully cured and does not pickup under traffic. When placing prime coat through an intersection where it is not possible to keep the lane closed, the prime coat may be covered immediately following its application with fine aggregate mechanically spread at a uniform rate of 2 to 4 lb/sq yd (1 to 2 kg/sq m).

- (2) Aggregate Bases. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface of 0.25 lb/sq ft \pm 0.01 (1.21 kg/sq m \pm 0.05).

The prime coat shall be permitted to cure until the penetration has been approved by the Engineer, but at no time shall the curing period be less than 24 hours for MC-30 or four hours for PEP. Pools of prime occurring in the depressions shall be broomed or squeegeed over the surrounding surface the same day the prime coat is applied.

The base shall be primed 1/2 width at a time. The prime coat on the second half/width shall not be applied until the prime coat on the first half/width has cured so that it will not pick up under traffic.

The residual asphalt binder rate will be verified a minimum of once per type of surface to be primed as specified herein for which at least 2,000 tons of HMA will be placed. The test will be according to the "Determination of Residual Asphalt in Prime and Tack Coat Materials" test procedure.

Prime coat shall be fully cured prior to placement of HMA to prevent pickup by haul trucks or paving equipment. If pickup occurs, paving shall cease in order to provide additional cure time.

Prime coat shall be placed no more than five days in advance of the placement of HMA. If after five days loss of prime coat is evident prior to covering with HMA, additional prime coat shall be placed as determined by the Engineer at no additional cost to the Department."

Revise the last sentence of the first paragraph of 406.13(b) to read:

"Water added to emulsified asphalt at the source as allowed in article 406.02 will not be included in the quantities measured for payment."

Revise the second paragraph of Article 406.13(b) of the Standard Specifications to read:

"Aggregate for covering prime coat will not be measured for payment."

Revise the first paragraph of Article 406.14 and the second paragraph of Article 407.12 of the Standard Specifications to read:

"Prime Coat will be paid for at the contract unit price per pound (kilogram) of residual asphalt applied for BITUMINOUS MATERIALS (PRIME COAT), POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT) or NON-TRACKING BITUMINOUS MATERIALS (PRIME COAT)."

Revise Article 407.06(b) of the Standard Specifications to read:

"A bituminous prime coat shall be applied between each lift of HMA according to Article 406.05(b)."

Revise Article 1032.02 of the Standard Specifications to read:

"**1032.02 Measurement.** Asphalt binders, emulsified asphalts, rapid curing liquid asphalt, medium curing liquid asphalts, slow curing liquid asphalts, asphalt fillers, and road oils will be measured by weight.

A weight ticket for each truck load shall be furnished to the inspector. The truck shall be weighed at a location approved by the Engineer. The ticket shall show the weight of the empty truck (the truck being weighed each time before it is loaded), the weight of the loaded truck, and the net weight of the bituminous material.

When an emulsion or cutback is used for prime coat, the percentage of asphalt residue of the actual certified product shall be shown on the producer's bill of lading or attached certificate of analysis. If the producer adds extra water to an emulsion at the request of the purchaser, the amount of water shall also be shown on the bill of lading.

Payment will not be made for bituminous materials in excess of 105 percent of the amount specified by the Engineer."

Add the following to the table in article 1032.04 of the Standard Specifications:

"SS-1vh	160 - 180	70 - 80"
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Add the following to Article 1032.06 of the Standard Specifications:

"(g) Non Tracking Emulsified Asphalt SS-1vh:

Requirements for SS-1vh			
Test		SPEC	AASHTO Test Method
Saybolt Viscosity @ 25C,	SFS	20-200	T 72
Storage Stability, 24hr.,	%	1 max.	T 59
Residue by Evaporation,	%	50 min.	T 59
Sieve Test,	%	0.3 max.	T 59
Tests on Residue from Evaporation			
Penetration @25°C, 100g., 5 sec., dmm		20 max.	T 49
Softening Point,		°C 65 min.	T 53
Solubility,	%	97.5 min.	T 44
Orig. DSR @ 82°C,	kPa	1.00 min.	T 315"

Revise the last table of Article 1032.06 to read:

"Grade	Use
SS-1, SS-1h, CSS-1, CSS-1h, HFE-90, SS-1hP, CSS-1hP, SS-1vh	Prime or fog seal
PEP	Bituminous surface treatment prime
RS-2, HFE-90, HFE-150, HFE-300, CRSP, HFP, CRS-2, HFRS-2	Bituminous surface treatment
CSS-1h Latex Modified	Microsurfacing"

Add the following to Article 1101 of the Standard Specifications:

"1101.19 Regenerative Air Vacuum Sweeper. The regenerative air vacuum sweeper shall blast re-circulated, filtered air through a vacuum head having a minimum width of 6.0 feet at a minimum rate of 20,000 cubic feet per minute."

FINE AGGREGATE FOR HOT-MIX ASPHALT (HMA) (D-1)

Effective: May 1, 2007

Revised: January 1, 2012

Revise Article 1003.03 (c) of the Standard Specifications to read:

- "(c) Gradation. The fine aggregate gradation for all HMA shall be FA1, FA 2, FA 20, FA 21 or FA 22. When Reclaimed Asphalt Pavement (RAP) is incorporated in the HMA design, the use of FA 21 Gradation will not be permitted.

EMBANKMENT I

Effective: March 1, 2011

Revised: November 1, 2013

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

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

- a) The laboratory Standard Dry Density shall be a minimum of 90 lb/cu ft (1450 kg/cu m) when determined according to AASHTO T 99 (Method C).
- b) The organic content shall be less than ten percent determined according to AASHTO T 194 (Wet Combustion).
- c) Soils which demonstrate the following properties shall be restricted to the interior of the embankment and shall be covered on both the sides and top of the embankment by a minimum of 3 ft (900 mm) of soil not considered detrimental in terms of erosion potential or excess volume change.
 - 1) A grain size distribution with less than 35 percent passing the number 75 um (#200) sieve.
 - 2) A plasticity index (PI) of less than 12.
 - 3) A liquid limit (LL) in excess of 50.
- d) Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.
- e) The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

CONSTRUCTION REQUIREMENTS

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

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

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

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

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

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

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

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

FRICTION SURFACE AGGREGATE (D1)

Effective: January 1, 2011

Revised: November 1, 2013

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

- “(4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.
- a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).
 - b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase.”

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

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

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

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	Allowed Alone or in Combination: Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA All Other	Shoulders	Allowed Alone or in Combination: Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) 1/ Crushed Steel Slag1/ Crushed Concrete
HMA High ESAL Low ESAL	C Surface IL-12.5,IL-9.5, or IL-9.5L	Allowed Alone or in Combination: Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) 1/ Crushed Steel Slag1/ Crushed Concrete
HMA High ESAL	D Surface IL-12.5 or IL-9.5	Allowed Alone or in Combination: Crushed Gravel Carbonate Crushed Stone (other than Limestone) Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) 1/ Crushed Steel Slag1/ Crushed Concrete
		Other Combinations Allowed:
		Up to... With...
		25% Limestone Dolomite

Use	Mixture	Aggregates Allowed	
		50% Limestone	Any Mixture D aggregate other than Dolomite
		75% Limestone	Crushed Slag (ACBF)1/ or Crushed Sandstone
HMA High ESAL	F Surface IL-12.5 or IL-9.5	Allowed Alone or in Combination: Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF)1/ Crushed Steel Slag1/ No Limestone or no Crushed Gravel alone.	
		Other Combinations Allowed:	
		Up to...	With...
		50% Crushed Gravel, or Dolomite	Crushed Sandstone, Crushed Slag (ACBF)1/ Crushed Steel Slag1/, or Crystalline Crushed Stone
HMA High ESAL	SMA Ndesign 80 Surface	Crystalline Crushed Stone Crushed Sandstone Crushed Steel Slag	

When either slag is used, the blend percentages listed shall be by volume.

Add the following to Article 1004.03 (b):

"When using Crushed Concrete, the quality shall be determined as follows. The Contractor shall obtain a representative sample from the stockpile, witnessed by the Engineer, at a frequency of 2500 tons (2300 metric tons). The sample shall be a minimum of 50 lb (25 kg). The Contractor shall submit the sample to the District Office. 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 by weight will be applied for acceptance. The stockpile shall be sealed until test results are complete and found to meet the specifications above."

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

Effective: June 26, 2006

Revised: January 1, 2013

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

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

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

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

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

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

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

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

“(c) RAP Materials (Note 3)1031”

Add the following note to 1030.02 of the Standard Specifications:

Note 3. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013

Revised: November 1, 2013

Revise Article 406.14(b) of the Standard Specifications to read.

“(b) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was not produced within 2.0 to 6.0 percent air voids or within the individual control limits of the JMF, the mixture and test strip will not be paid for and the mixture shall be removed at the Contractor's expense. An additional test strip and mixture will be paid for in full, if produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF.”

Revise Article 406.14(c) of the Standard Specifications to read.

“(c) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF, the mixture shall be removed. Removal will be paid in accordance to Article 109.04 of the Standard Specifications. This initial mixture and test strip will be paid for at the contract unit prices. The additional mixture will be paid for at the contract unit price, and any additional test strips will be paid for at one half the unit price of each test strip.”

1) Design Composition and Volumetric Requirements

Revise the following table in Article 1030.01 of the Standard Specifications to read.

High ESAL	IL-25.0 binder; IL-19.0 binder; IL-12.5 surface; IL-9.5 surface; IL-4.75, SMA
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Revise the following table in Article 1030.04(a)(1):

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

High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/}														
Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm		IL-9.5 mm		IL-4.75 mm		SMA ^{4/} IL-12.5 mm		SMA ^{4/} IL-9.5 mm	
	Min	max	min	max	min	max	min	max	min	max	min	max	min	max

1 1/2 in. (37.5 mm)		100												
1 in. (25 mm)	90	100		100										
3/4 in. (19 mm)		90	82	100		100					100			
1/2 in. (12.5 mm)	45	75	50	85	90	100		100		100	80	100		100
3/8 in. (9.5 mm)						89	90	100		100		65	90	100
#4 (4.75 mm)	24	42 ^{2/}	24	50 ^{2/}	28	65	32	69	90	100	20	30	36	50
#8 (2.36 mm)	16	31	20	36	28	48 ^{3/}	32	52 ^{3/}	70	90	16	24 ^{5/}	16	32
#16 (1.18 mm)	10	22	10	25	10	32	10	32	50	65				
#30 (600 μm)											12	16	12	18
#50 (300 μm)	4	12	4	12	4	15	4	15	15	30				
#100 (150 μm)	3	9	3	9	3	10	3	10	10	18				
#200 (75 μm)	3	6	3	6	4	6	4	6	7	9 ^{6/}	7.0	9.0 ^{6/}	7.5	9.5 ^{6/}
Ratio Dust/Asphalt Binder		1.0		1.0		1.0		1.0		1.0		1.5		1.5

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 40 percent passing the #4 (4.75 mm) sieve for binder courses with Ndesign ≥ 90.
- 3/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign ≥ 90.
- 4/ The maximum percent passing the 20 μm sieve shall be ≤ 3 percent.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the #8 (2.36mm) sieve shall not be adjusted above 24 percent.
- 6/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer."

Delete Article 1030.04(a)(4) of the Standard Specifications.

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

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

VOLUMETRIC REQUIREMENTS High ESAL						
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum					Voids Filled with Asphalt Binder (VFA), %
	IL-25.0	IL-19.0	IL-12.5	IL-9.5	IL-4.75 ^{1/}	
50	12.0	13.0	14.0	15.0	18.5	65 - 78 ^{2/}
70					65 - 75	
90						
105						

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

2/ VFA for IL-4.75 shall be 72-85%"

Delete Article 1030.04(b) (4) of the Standard Specifications.

Revise table in Article 1030.04(b)(5) as follows:

"(5) SMA Mixtures.

Volumetric Requirements SMA ^{1/}			
Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
80 ^{4/}	3.5	17 ^{2/}	75 - 83
		16 ^{3/}	

1/ Maximum Draindown shall be 0.3%.

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

3/ Applies when specific gravity of coarse aggregate is < 2.760 .

4/ For surface course, coarse aggregate shall be Class B Quality; the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone.*
For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone.*

*Blending of different types of aggregate will not be permitted.

2) Design Verification and Production

Description. The following states the requirements for Hamburg Wheel and Tensile Strength testing for High ESAL, IL-4.75, and Stone Matrix Asphalt (SMA) hot-mix asphalt (HMA) mixes during mix design verification and production.

When the options of Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement are used by the Contractor, the Hamburg Wheel and tensile strength requirements in this special provision will be superseded by the special provisions for Warm Mix Asphalt and/or by the District special provision for Reclaimed Asphalt Pavement and Reclaimed Asphalt Shingles as applicable.

Mix Design Testing. Add the following to Article 1030.04 of the Standard Specifications:

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

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

(1)Hamburg Wheel Test criteria.

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

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

For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

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

Production Testing.

Revise first paragraph of Article 1030.06(a) to read:

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

Delete second paragraph of Article 1030.06 (a).

Revise first sentence in fourth paragraph of Article 1030.06 (a) to read:

"Before constructing the test strip, target values shall be determined by applying gradation correction factors to the JMF when applicable."

Mixture sampled to represent the test strip shall include additional material sufficient for the Department to conduct Hamburg Wheel testing according to Illinois Modified AASHTO T324 (approximately 60 lb (27 kg) total).

Add the following to Article 1030.06 of the Standard Specifications:

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

The Department may conduct additional Hamburg Wheel Tests on production material as determined by the Engineer. If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria"

The Contractor shall immediately cease production upon notification by the Engineer of failing Hamburg Wheel test. All prior produced material may be paved out provided all other mixture criteria are being met. No additional mixture shall be produced until the Engineer receives passing Hamburg Wheel tests.

Basis of Payment. Revise the seventh paragraph of Article 406.14 of the Standard Specifications to read:

"For all mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive."

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

Effective: November 1, 2012

Revise: August 15, 2014

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

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

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting from cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Bureau of Materials and Physical Research Policy Memorandum "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve . RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
 - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
 - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

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

- (a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including

unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. "Non- Quality, FRAP -#4 or Type 2 RAS", etc...).

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the FRAP will be used in.
- (2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, Superpave (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 inch single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (4) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP or FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, plant cleanout etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present.

However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of type 1 RAS with type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval. The Engineer's written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be maintained by project contract number and kept for a minimum of three years.

1031.03 Testing. FRAP and RAS testing shall be according to the following.

(a) FRAP Testing. When used in HMA, the FRAP shall be sampled and tested either during processing or after stockpiling. It shall also be sampled during HMA production.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) Incoming Material. For testing as incoming material, washed extraction samples shall be run at a minimum frequency of one sample per 2000 tons (1800 metric tons) or once per week, whichever comes first.

(3) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample of FRAP, shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS shall be sampled and tested during stockpiling according to Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources". The Contractor shall also sample as incoming material at the HMA plant.

- (1) During Stockpiling. Washed extraction and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.
- (2) Incoming Material. For testing as incoming material at the HMA plant, washed extraction shall be run at the minimum frequency of one sample per 250 tons (227 metric tons). A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). The incoming material test results shall meet the tolerances specified herein.

The Contractor shall obtain and make available all test results from start of the initial stockpile sampled and tested at the shingle processing facility in accordance with the facility's QC Plan.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

1031.04 Evaluation of Tests. Evaluation of tests results shall be according to the following.

- (a) Evaluation of FRAP Test Results. All test results shall be compiled to include asphalt binder content, gradation and, when applicable (for slag), G_{mm} . A five test average of results from the original pile will be used in the mix designs. Individual extraction test results run thereafter, shall be compared to the average used for the mix design, and will be accepted if within the tolerances listed below.

Parameter	FRAP
No. 4 (4.75 mm)	$\pm 6 \%$
No. 8 (2.36 mm)	$\pm 5 \%$
No. 30 (600 μm)	$\pm 5 \%$
No. 200 (75 μm)	$\pm 2.0 \%$
Asphalt Binder	$\pm 0.3 \%$
G_{mm}	± 0.03 ^{1/}

- 1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity".

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the FRAP stockpile shall not be used in Hot-Mix Asphalt unless the FRAP representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

The Contractor shall maintain a representative moving average of five tests to be used for Hot-Mix Asphalt production.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)" or Illinois Modified AASHTO T-164-11, Test Method A.

- (b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. A five test average of results from the original pile will be used in the mix designs. Individual test results run thereafter, when compared to the average used for the mix design, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the RAS shall not be used in Hot-Mix Asphalt unless the RAS representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

- (c) Quality Assurance by the Engineer. The Engineer may witness the sampling and splitting conduct assurance tests on split samples taken by the Contractor for quality control testing a minimum of once a month.

The overall testing frequency will be performed over the entire range of Contractor samples for asphalt binder content and gradation. The Engineer may select any or all split samples for assurance testing. The test results will be made available to the Contractor as soon as they become available.

The Engineer will notify the Contractor of observed deficiencies.

Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits.

Test Parameter	Acceptable Limits of Precision	
% Passing: ^{1/}	FRAP	RAS
1 / 2 in.	5.0%	
No. 4	5.0%	
No. 8	3.0%	4.0%
No. 30	2.0%	3.0%
No. 200	2.2%	2.5%
Asphalt Binder Content	0.3%	1.0%
G _{mm}	0.030	

1/ Based on washed extraction.

In the event comparisons are outside the above acceptable limits of precision, the Engineer will immediately investigate.

- (d) Acceptance by the Engineer. Acceptable of the material will be based on the validation of the Contractor's quality control by the assurance process.

1031.05 Quality Designation of Aggregate in RAP and FRAP.

- (a) RAP. The aggregate quality of the RAP for 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. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant 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. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of "B" quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

1031.06 Use of FRAP and/or RAS in HMA. The use of FRAP and/or RAS shall be a Contractor's option when constructing HMA in all contracts.

- (a) FRAP. The use of FRAP in HMA shall be as follows.

- (1) Coarse Aggregate Size (after extraction). The coarse aggregate in all FRAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (2) Steel Slag Stockpiles. FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.
- (3) Use in HMA Surface Mixtures (High and Low ESAL). FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.
- (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.
- (5) Use in Shoulders and Subbase. FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, Restricted FRAP, conglomerate, or conglomerate DQ.

- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.
- (c) FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with FRAP in HMA mixtures up to a maximum of 5.0% by weight of the total mix.

When FRAP is used alone or FRAP is used in conjunction with RAS, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

Max Asphalt Binder Replacement for FRAP with RAS Combination

HMA Mixtures ^{1/2/}	Maximum % ABR		
	Binder/Leveling Binder	Surface	Polymer Modified ^{3/}
30L	50	40	10
50	40	35	10
70	40	30	10
90	40	30	10 ^{4/}
4.75 mm N-50			30
SMA N-80			20

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.
- 2/ When the binder replacement exceeds 15 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent binder replacement using a virgin asphalt binder grade of PG64-22 will be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 percent, the required virgin asphalt binder grade shall be PG64-28.
- 3/ When the ABR for SMA or IL-4.75 is 15 percent or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.
- 4/ For polymerized surface mix used for overlays, with up to 10 percent ABR, a SBS PG70-22 will be required. However, if used in full depth HMA, a SBS PG70-28 will be required.

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

- (a) FRAP and/or RAS. FRAP and /or RAS mix designs shall be submitted for verification. If additional FRAP or RAS stockpiles are tested and found to be within tolerance, as defined under "Evaluation of Tests" herein, and meet all requirements herein, the additional FRAP or RAS stockpiles may be used in the original design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.500 shall be used for mix design purposes.

1031.08 HMA Production. HMA production utilizing FRAP and/or RAS shall be as follows.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAS and FRAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If during mix production, corrective actions fail to maintain FRAP, RAS or QC/QA test results within control tolerances or the requirements listed herein the Contractor shall cease production of the mixture containing FRAP or RAS and conduct an investigation that may require a new mix design.

- (a) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.
- (b) HMA Plant Requirements. HMA plants utilizing FRAP and/or RAS shall be capable of automatically recording and printing the following information.
 - (1) Dryer Drum Plants.
 - a. Date, month, year, and time to the nearest minute for each print.
 - b. HMA mix number assigned by the Department.
 - c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

- d. Accumulated dry weight of RAS and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
 - e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
 - f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
 - g. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.
 - h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)
 - i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
 - j. Accumulated mixture tonnage.
 - k. Dust Removed (accumulated to the nearest 0.1 ton)
- (2) Batch Plants.
- a. Date, month, year, and time to the nearest minute for each print.
 - b. HMA mix number assigned by the Department.
 - c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
 - d. Mineral filler weight to the nearest pound (kilogram).
 - f. RAS and FRAP weight to the nearest pound (kilogram).
 - g. Virgin asphalt binder weight to the nearest pound (kilogram).
 - h. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.09 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of

RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply. RAP used 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. (37.5mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded, FRAP, or single sized will not be accepted for use as Aggregate Surface Course and Aggregate Shoulders."

HEAT OF HYDRATION FOR CONCRETE STRUCTURES (D-1)

Effective: November 1, 2013

Article 1020.15 shall not apply.

TEMPORARY DITCH CHECKS

This Special Provision revises Section 280 of the Standard Specifications for Road and Bridge Construction to eliminate the use of Aggregate Ditch Checks and Hay or Straw Bales for Temporary Ditch Checks.

Revise second sentence of Article 280.04(a) Temporary Ditch Checks as follows: Temporary ditch checks shall be constructed with products from the Department's approved list except for the following hay or straw bales nor aggregate ditch checks.

AGGREGATE SUBGRADE IMPROVEMENT (D-1)

Effective: February 22, 2012

Revised: November 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
(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 or CS 02 but shall not exceed 40 percent of the total product. The top size of the Coarse RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01 or CS 02 are used in lower lifts. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

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 CS 01 or CS 02 shall be 24 in. (600 mm).

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

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

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

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

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

Add the following to Section 1004 of the Standard Specifications:

"1004.06 Coarse Aggregate for Aggregate Subgrade Improvement. The aggregate shall be according to Article 1004.01 and the following.

Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.

Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.

Gradation.

The coarse aggregate gradation for total subgrade thicknesses of 12 in. (300 mm) or greater shall be CS 01 or CS 02.

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	

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

Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

FORM LINER TEXTURED SURFACE

Description: 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 treatments as shown in the drawings and specifications. Form lined surfaces shall include areas of MSE Precast Wall Panels. Work shall be performed in accordance with applicable portions of Section 503 and 504 of the IDOT Standard Specifications and as specified herein.

Form liners shall be installed to a minimum of 1'-0" below finished grade on the MSE walls.

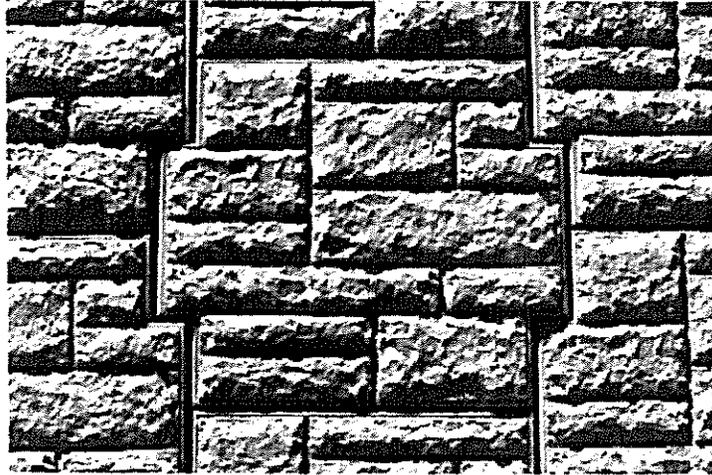
Fabricator Requirements: The following form liner manufacturers are known manufacturers that provide the listed patterns. All manufacturers of form liners shall adhere to the provisions listed herein and in the plans.

Form Liners for MSE Retaining Walls

1. Reinforced Earth Company, Reston, VA (800-446-5700)
Ashlar Stone
2. Custom Rock International, St. Paul, MN (800-637-2447)
#12019 Ashlar
3. Greenstreak, St. Louis, MO (800-325-9504)
Ashlar Cut Stone

Other manufacturer's products will be considered, provided sufficient information is submitted at least 30 days prior to use to allow the Engineer to determine that products proposed are equivalent to those named.

The appropriate number of molds and subsequent form liners shall be provided to ensure that the natural and continuous stone pattern be maintained throughout all panels, including stone coursing, mortar joint and relief. Retaining wall patterns shall consist of an Ashlar Pattern with a maximum 1 5/8" relief. The form liner pattern is to be as shown below:



Form Liners for MSE Retaining Walls

Shop Drawings: Shop drawings of the concrete facing patterns shall be submitted for each area of textured concrete. Shop drawing submittals shall include:

- (1) Individual form liner pattern descriptions, dimensions, and sequencing of form liner sections. Include details showing typical cross sections, joints, corners, step footings, stone relief, stone size, pitch/working line, mortar joint and bed depths, joint locations, edge treatments, and any other special conditions.
- (2) Elevation views of the form liner panel layouts for the texture surface showing the full length and height of the structures including the footings with each form liner panel outlined. The arrangement of the form liner panels shall provide a continuous pattern of desired textures and colors with no interruption of the pattern made at the panel joints.

To minimize the possibility of preparing an unsatisfactory Cast Concrete Mockup as described herein, the Contractor may elect to provide shop drawings for the Mockups.

Materials: Form liners shall be of high quality, highly reusable and capable of withstanding anticipated concrete pour pressures without causing leakage or causing physical defects. Form liners shall attach easily to pour-in-place forms and be removable without causing concrete surface damage or weakness in the substrate. Liners used for the texture shall be made from high-strength elastomeric urethane material which shall not compress more than 0.02 feet when poured at a rate of 10 vertical feet per hour. 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 the removable metallic form ties will not be allowed.

Deliver materials in original and sealed containers, clearly marked with the manufacturer's name, brand name, type of material, batch number, and date of manufacture.

Form Liner Mockup: The Contractor shall provide a cast concrete mockup containing the Ashlar form liner surface. The form liner manufacturer's technical representative shall be on-site for technical supervision during the installation and removal operations.

Purpose of the mockup is to select and verify the masonry pattern to be used.

- (1) Locate mockup on site as directed by the Engineer.
- (2) The precast mockup shall consist of a minimum of 3 modules. Size shall be varied as required to demonstrate patterning.
- (3) Include examples of each condition required for construction i.e. liner joints, construction joints, expansion joints, steps, corners, and special conditions due to topography or manmade elements, etc.
- (4) Upon receipt of comments from inspection of the mockup, adjustments or corrections shall be made to the molds where imperfections are found. If required, additional mockups shall be prepared when the initial mockup is found to be unsatisfactory at no additional cost.
- (5) After mockup is determined to be acceptable by the Engineer, construction of the project may proceed, using mockup as a quality standard.

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 blemishes or tears. If necessary, the form liners shall be repaired in accordance with the manufacturer's recommendations. All form liner panels that will not perform as intended or are no longer repairable shall be replaced. An on-site inventory of each panel type shall be established based on the approved form liner shop drawings and anticipated useful life for each liner type.

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 of seams 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 pattern joints or reveals. Finished textures shall be continuous without visual disruption and properly aligned over adjacent and multiple liner panels. 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. Cold joints shall not occur within continuous form liner pattern fields. Wall ties shall be coordinated with the liner and form to achieve the least visible result. 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, as well as IDOT's material specifications and special provisions.

With the use of standard Portland cement concrete mixtures, the Contractor shall employ proper consolidation methods to ensure the highest quality finish. 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 1.5 feet. Internal vibrator operation shall be at appropriate intervals and depths and withdrawn slowly enough to assure a minimal amount of surface air voids and the best possible finish without causing segregation. External form vibrators may be required to assure the proper results. Any use of external form vibrators must be approved by the form liner manufacturer and the County. The use of internal or external vibratory action shall not be allowed with the

use of self-consolidating concrete mixtures. It is the intention of this specification that no rubbing of flat areas or other repairs shall be required after form removal. The finished exposed formed concrete surfaces shall be free of visible vertical seams, horizontal seams, and butt joint marks. Grinding and chipping of finished formed surfaces shall be avoided.

Guidelines For Use of Form Liners: Form liners are being used on this project to achieve very specific architectural results. The Contractor shall not deviate from the guidelines contained herein unless authorized by the Engineer in writing.

Method of Measurement: This work shall be measured and paid for in place and the area computed in square feet of actual concrete surface area formed with form liners as specified herein.

Precast MSE Wall Panels: This work will not be measured for payment.

Form Liner Mockup will not be measured for payment. The effort required to prepare the initial mockup, perform corrections as directed and pour additional mockups as required shall not be paid for separately, but shall be included in the respective pay item.

Basis of Payment: Form lined surfaces will be paid for at the contract unit price per square foot for FORM LINER TEXTURED SURFACE, which shall also include the cost for preparing and pouring form liner mockups. The unit price bid shall include all labor, material and costs associated with forming, pouring, surface coloring and disposal of forms, including a satisfactory cast concrete mockup panel to the requirements included herein.

Precast MSE Wall Panels: This work will not be measured for payment but included in the cost of Mechanically Stabilized Earth Retaining Walls.

16" D.I.P. WATER MAIN AND APPURTENANCES

This work shall include the furnishing, preparation, and installation of pipe, pipe fittings, valves, hydrants, and related products for installation.

At least 30 days prior to installation of water mains covered in these specifications, the Contractor is required to submit to the Engineer shop drawings of all items to be installed showing locations, dimensions, and details, including piping sizes, pipe materials, fittings, valves, basins, hydrants, and other appurtenances. Detailed drawings of any proposed deviation from the Contract Drawings due to actual field conditions or other causes shall be included with the foregoing submittal. The manufacturer's catalog description of all piping materials, fittings, valves, hydrants, basins, and other related items shall also be submitted for approval to show conformance with the requirements of these Specifications and the Contract Drawings. The shop drawings shall have a bill of material on each drawing defining all items mentioned above. All catalog and descriptive data shall note where the specific item is to be installed and a cross reference made on the Contract Drawings. The manufacturer shall certify to a minimum 3 years experience specializing in manufacturing of products specified herein.

The Contractor shall establish and maintain quality control of all equipment and construction operations involved under this item. To assure compliance with contract requirements, the Contractor shall maintain records of his quality control for all items listed below.

1. Check for damage to and defects in materials.

2. Check for proper storage of materials and provide a systematic listing of these items and their location.
3. Check to see that shop drawings on all piping systems have been submitted and are approved.
4. Check to see that all piping materials conform to approved shop drawings.
5. Review requirements of plans and specifications and check layouts.

A copy of these records shall be kept at the jobsite and shall be available at all times for the Engineer's review.

All manufactured items shall be standard commercial products of reputable manufacturers. Where materials are shown on the Drawings or listed but not specifically covered by a standard or specification, the Contractor shall furnish best commercial grades of material or articles subject to the approval of the Engineer. When two or more articles of the same material or equipment are required, similar articles of the same size shall be products of a single manufacturer.

The Contractor shall furnish to the Owner sufficient copies of the manufacturer's sworn certificates and test results from a reputable testing laboratory showing the results of tests made on all pipe delivered to the project in accordance with the ASTM, AWWA, or ANSI Specifications for the various types of pipe to be furnished. All expenses incidental to the pipe testing shall be considered as included in the prices bid for pipe furnished and installed, and no additional payment will be allowed thereof.

The Contractor shall furnish the Engineer with lists, in duplicate, of all pieces of pipe and fittings in each shipment received, and these lists shall give the serial or mark number, weight, class, size and description of each item received at the jobsite.

The Manufacturer shall warrant the equipment to be free of material or workmanship defects for a period of one (1) year from the date of substantial completion established by the Owner. The work specified herein shall be warranted to be free of material or workmanship defects for a period of one year from the date of substantial completion established by the Owner.

Piping Materials:

- A. Ductile iron pipe shall be ANSI/AWWA C151/A21.51, Class 52
 1. Joints
 - a. Push-On: ANSI/AWWA C111/A21.11
 - b. Mechanical Joint: ANSI/AWWA C111/A21.11
 - c. Bolts, nuts, and threaded rods shall meet the requirements of ASTM A307, Grade B.
 - d. Ductile iron pipe shall be push-on type unless otherwise indicated on the drawings.
 - e. Restrained Joints shall be used at locations indicated on the drawings and at all mechanical joint connections, and shall be in accordance to ANSI/AWWA C111/A21.11.
 - f. All bends, tees, and fittings must be restrained, mechanical joint type, in accordance to ANSI/AWWA C111/A21.11, where indicated on the drawings.
 2. Fittings

- a. ANSI/AWWA C110/A21.10 for standard body or ANSI/AWWA C153/A21.53 for compact body. All fittings shall be standard body or compact body, mechanical joint type with ductile iron retainer glands unless noted otherwise. Fittings shall be of class or pressure rating not less than that of connecting pipe.
 - b. Sleeves shall be restrained, mechanical joint type for connecting to existing pipe.
3. Linings
- a. Interior Cement Linings: ANSI/AWWA C104/A21.4 unless otherwise indicated, all cast iron and ductile iron pipe and fittings shall be cement lined and coated within an asphalt seal coat.
4. Coatings
- a. Asphaltic coated in accordance with ANSI/AWWA C151/A21.51 for pipe, ANSI/AWWA C153/A21.53 for compact fittings and ANSI/AWWA C110/A21.10 for standard fittings.
5. Encasement
- a. Buried ductile iron pipe and fittings shall be encased in polyethylene conforming to the requirements of ANSI/AWWA A21.5/C105. The polyethylene encasement shall be provided by the ductile iron pipe manufacturer and installed per the manufacturer's recommendation.
- B. Gate valves shall be resilient wedge type with ductile iron bodies and restrained mechanical joint end connections. Gate Valves shall meet the requirements of AWWA C509. The body and bonnet shall be coated with fusion bonded epoxy both interior and exterior, complying with AWWA C550 and be NSF 61 approved.
- C. Hydrants shall be 5/4" ductile iron rated at 250 psi. Hydrants shall meet the requirements of AWWA C502.
- D. Corporation connection taps, valves, materials, and installations shall conform to AWWA C800. All taps shall be direct and shall not require saddles. Corporation stops shall be installed at locations indicated on the plans or as directed by the Engineer.

General:

In addition to the Contract Documents, the installation of the pipe and pipe fittings shall be in accordance with latest editions of the IDOT Standard Specifications for Road and Bridge Construction in Illinois, IEPA Standards and Specifications for Soil Erosion and Sediment Control, Standard Specifications for Water and Sewer Main Construction in Illinois, State of Illinois plumbing code, and OSHA safety standards.

The Contract Drawings show the general arrangement for underground piping systems. Whenever the Contractor deems it necessary to deviate from the arrangements shown, he shall submit to the Engineer in writing a request for the deviation, along with drawings showing the proposed new arrangement. Deviation shall not be made until approval of new arrangements is obtained. Wherever piping arrangements are shown or required to be modified to accommodate the equipment approved for installation, the Contractor shall prepare and submit for approval detailed shop drawings of the new arrangement. Only new and unused materials shall be installed in the work specified herein.

The Contract Drawings are not intended to show every fitting, offset, or similar item. Piping systems shall include all unions, fittings, anchors, valves, gaskets, bracing, or other equipment necessary for the proper installation of the various systems, but shall include not less than that shown in the Contract Drawings. Piping shall be arranged and installed approximately as indicated, straight, plumb, and as direct as possible. All changes in direction of piping shall be made with fittings. Reduction in sizes of pipes shall be made with reducing fittings. Bushings will not be permitted unless specifically detailed on the drawings.

Proper and suitable tools and appliances for the safe and convenient handling and placing of the pipes, specials and valves shall be used. All pieces shall be carefully examined for defects and no piece shall be laid which is known to be defective. If any defective piece should be discovered after having been laid, it shall be removed and replaced with a sound piece, in a satisfactory manner, by the Contractor at his own expense. The pipes, specials, and valves shall be thoroughly cleaned before they are placed, shall be kept clean until they are accepted in the completed work, and when laid shall conform accurately to the lines and elevations shown on the Contract Drawings, or as specified.

Contractor shall coordinate the crossing of any existing or proposed piping with the Roadway contractor.

Excavation and Backfill:

Unless otherwise shown or directed, all pipe shall be laid to minimum depth of 5'-6" measured from the ground surface or established grade to the top of the pipe. In areas subject to subsequent excavation or fill, the pipes shall be laid to grades provided by the Engineer.

The trench shall be dug to the depth and alignment required for proper installation of the pipe. The trench shall be so braced and drained that workmen may work therein safely and efficiently. The Contractor shall note that excavations shall conform to the latest OSHA requirements for excavations. It is essential that the discharge from dewatering pumps be led to natural drainage channels or to drains. The Contractor shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures and piping, both known and unknown, may be determined, and he shall be held responsible for the repair of such structures and piping when broken or otherwise damaged by him.

The trench width may vary with and depend upon the depth of the trench and the nature of the excavated material encountered, but in any case shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly. The minimum width of unsheeted trench shall be as shown by the Contract Drawings.

All buried piping shall be backfilled with compacted excavated material or granular material as specified. The types of granular backfill materials shall be as indicated on the Contract Drawings. The minimum compaction requirement for all backfill materials shall be 90% Standard Proctor unless otherwise indicated in these Specifications or on the Contract Documents.

Granular backfill shall be used at locations where piping runs of any kind cross bituminous roadways, where one pipe crosses another and where piping spans from undisturbed earth to the wall of the structure. For selected roadway crossings granular backfill shall be used from the top of the gravel cradle to the bottom of the roadway base and shall be mechanically compacted. Where one pipe crosses another, or spans to a building wall, granular backfill shall be used to the midpoint of the highest pipe. Where one pipe crosses another, or spans to a building wall, granular backfill material shall be used and compacted as described below (unless the structure requires a specific backfill material). The Contractor shall notify the Engineer of the source of material he proposes to use for "Granular Backfill" and arrange for samples to be taken and tested prior to the time such material is ordered to the site. Material gradation results shall be submitted to the Engineer for approval prior to hauling to the site. Granular Backfill will be required at locations where water mains cross each other. All granular backfill material shall be compacted in maximum 8" lifts to a minimum of 98% Standard Proctor Density in accordance with ASTM D698 and at not more than 2% below nor more than 3% above the optimum moisture content. Care shall be taken during backfilling

operations so that adjacent newly placed concrete will not be disturbed as a result of vibration due to compaction equipment. No frozen materials shall be placed in pipe trenches as backfill materials.

The pipe shall be laid on compacted granular cradle so that the barrel of the pipe shall have a bearing for its full length. The type of granular cradle to be used in specific locations shall be designated by the Engineer. The granular cradle shall extend a minimum of 4" of below the pipe as shown on the drawings. Where the natural foundation soil, on which the pipe is to be bedded, consists of granular material suitable in its natural state for shaping and embedding a pipe, no granular cradle will be required, if approved by the Engineer. The cost of the granular cradle shall be considered incidental to the cost of the pipe runs, and separate payment will not be made thereof. The Contractor shall notify the Engineer of the source of material he proposes to use for "Granular Cradle Material" and arrange for samples to be taken and tested prior to the time such material is ordered to the site. Material graded to sizes other than those specified may be substituted for that specified, providing the gradation and samples are first submitted and approved for the intended purpose by the Engineer. All granular cradle materials shall be compacted to a minimum of 95% Standard Proctor Density in accordance with ASTM D698 and at not more than 2% below nor more than 3% above the optimum moisture content.

Over Excavation Backfill Requirement:

In cases where the trench excavation is carried beyond or below the lines and grades given by the Engineer, the Contractor shall, at his own expense, backfill all such excavated space with granular cradle material in layers not to exceed eight (8) inches in thickness and compact each layer solidly in place. Where, in the opinion of the Engineer, the excavation has been carried excessively below the lines and grades given by the Engineer, the Contractor shall be required to have a minimum of one moisture density test, in accordance with ASTM D698 (Standard Proctor Test) made on the backfill material. The Contractor shall be responsible for all Standard Proctor Density Tests required for this backfill and costs for the tests shall be considered incidental to the work. Once the Standard Proctor Tests have been run, the Contractor shall, at his own expense, refill all such excessively excavated space. The backfill material shall be placed in 6 to 8 inch layers and then compacted to a minimum of 95% Standard Proctor density or that necessary to prevent settlement. Compaction of granular cradle materials within three feet of the walls of a structure shall be accomplished by the use of hand operated compaction equipment. Use of heavy compaction equipment within three feet of the walls of a structure will not be allowed. Compaction of backfill by jetting shall not be permitted under any circumstances.

Laying of Pipe:

Laying of pipe shall be accomplished to line and grade in the trench only after it has been dewatered and the foundation and/or bedding has been prepared. Mud, silt, gravel and other foreign material shall be kept out of the pipe and off the jointing the surface.

Contractor shall verify that excavations are required grade, dry and not over-excavated. Prior to installation ream pipe and tube ends and remove burrs, scale and dirt, on inside and outside before assembly.

All pipe laid shall be retained in position so as to maintain alignment and joint closure until sufficient backfill has been completed to adequately hold the pipe in place. All pipe shall be laid to conform to the prescribed lines and grades shown on the plans, with the limits that follow.

Permissible Deflections of Joints:

Whenever necessary to deflect pipe from a straight line either in a vertical or horizontal plane to avoid obstructions, to plumb stems, or where long radius curves are permitted, the degree of deflection shall be no greater than recommended by AWWA C600 and shall be approved by the Engineer.

Cutting Pipe:

Cutting of pipe for inserting valves, fittings or closure pieces shall be done in a workmanlike manner without damage to the pipe.

Braced and Sheeted Trenches:

Whenever necessary to prevent caving, excavations in sand, gravel, sandy soil or other unstable materials shall be adequately sheeted and braced. Where sheeting and bracing are used, the trench width shall be increased accordingly. Trench sheeting shall remain in place until the pipe has been laid, tested for defects, and repaired if necessary, and the backfill around it compacted to a depth of two feet over the top of the pipe.

Trenching by Machine or by Hand:

The use of trench digging machinery will be permitted except in places where operation of same will cause damage to trees, buildings or existing structures above or below ground, in which case hand methods shall be employed.

Manner of Handling Pipe and Accessories in the Trench:

Proper implements, tools and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient completion of the work. All pipe fittings, valves and hydrants shall be carefully lowered into the trench, piece by piece, by means of derrick, ropes or other suitable tools or equipment in such manner as to prevent damage to pipe or pipe coating. Under no circumstances shall pipe or accessories be dropped or dumped into the trench.

Flow of Drains and Sewers Maintained:

Adequate provision shall be made for the flow of sewers, drains and water courses encountered during the construction and the structures which may have been disturbed shall be satisfactorily restored upon completion of the work.

Property Protection:

Trees, fences, poles and all other property shall be protected unless the removal is authorized. Any property damaged shall be satisfactorily restored by the Contractor at no additional compensation.

Piling Excavated Material:

All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing roadways. Fire hydrants under pressure, valve pit covers, valve boxes, manholes, electrical vaults, or other utility controls shall be left unobstructed and accessible until the work is completed. Natural watercourses shall not be obstructed. Surplus material and excavated material unsuitable for backfilling shall be transported and disposed of off the site in disposal areas obtained by the Contractor.

Removal of Water:

The Contractor shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly dispose of all water entering the excavations or other parts of the work until all work to be performed therein has been completed. No water containing settleable solids shall be discharged into storm sewers. The proposed method for controls of groundwater shall be submitted to the Engineer for approval.

Preventing Trench Water from Entering Pipe:

At times when the pipe laying is not in progress, the open ends of the pipe shall be closed by approved means, and no trench water shall be permitted to enter the pipe.

Pipe Kept Clean:

All foreign matter or dirt shall be removed from the inside of the pipe before it is lowered in its position in the trench, and it shall be kept clean by approved means during and after laying. If, in the opinion of the Engineer, the pipe contains dirt that will not be removed during the flushing operation, the interior of the pipe shall be cleaned and

swabbed, as necessary, with a bactericidal solution made up with calcium hypochlorite, chlorinated lime or sodium hypochlorite.

Plugging Dead Ends:

Plugs shall be inserted into the joints of all dead end pipes, tees or crosses. No ends shall be left open during construction activities.

Barricades, Guards and Safety Provisions:

To protect persons from injury and to avoid property damage, adequate barricades, construction signs, lights and guards as required shall be placed and maintained by the Contractor at his expense during the progress of the construction work and until it is safe for traffic to use the roadways. All material piles, equipment and pipe which may serve as obstructions to traffic shall be enclosed by fences or barricades and shall be protected by proper lights when the visibility is poor. The rules and regulations of OSHA and the appropriate authorities respecting safety provisions shall be observed.

Structure Protection:

Temporary support, adequate protection and maintenance of all underground and surface structures, drains, piping and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his expense. The structures which may have been disturbed shall be restored upon completion of the work.

Cleaning Up:

Surplus pipe line materials, tools and temporary structures shall be removed by the Contractor; and all dirt, rubbish and excess earth from excavation shall be hauled to a landfill by the Contractor, and the construction site shall be left clean, to the satisfaction of the Engineer and the Owner.

Concrete Cradle:

Where subgrade conditions, in the opinion of the Engineer, warrant extra precautions for the bedding of pipe, the Engineer may order the construction of a concrete cradle to be installed. The design requirements for a concrete cradle shall be furnished by the Design Consultant. Payment for the concrete cradle shall be by Change Order as extra work. Deep piping shall be tested prior to completing backfilling or covering with concrete.

Vaults:

Vaults for valves and other water main items shall be meet the requirements of ASTM C-478. Manholes shall have cast iron frame and solid cover with "Water" cast into the top face. Frame and lid shall be Neenah R-1712, Type B or East Jordan 1022, Type 1, or US Foundry Type S lid with 3160 grate with self-sealing cover and concealed pickhole.

Testing and Disinfection:

A. Hydrostatic Testing

1. The Contractor shall subject the following piping systems to a hydrostatic water test of not less than one and one-half (1.5) times the normal operating pressure for a period of not less than 2 hours. The piping shall be tested after backfilling. Hydrostatic water testing shall conform with Section 41-2.14 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition. (Exception: Air piping shall be air tested in lieu of a hydrostatic test).

Item	Normal Operating Pressure
Potable Water System	50 psig

2. Procedure for Test: Each valved section of pipe shall be slowly filled with water. Before applying the specified test pressure, all air shall be expelled from the pipe. To accomplish this, taps shall be made, if necessary, at points of highest elevation and afterwards tightly plugged. Then the

specified test pressure shall be applied by means of a pump connected to the pipe in a satisfactory manner. The pump pipe connection and all necessary apparatus including gages and meters shall be furnished by the Contractor. All joints showing visible leaks shall be repaired until tight. Any cracked or defective pipes, fittings, valves, or hydrants discovered in consequence of this pressure test shall be removed and replaced by the Contractor with sound material and the test shall be repeated until satisfactory to the Engineer.

3. Permissible Leakage:

- a. Suitable means shall be provided by the Contractor for determining the quantity of water lost by leakage under the specified test pressure. The leakage test shall be in accordance with Section 41-2.14C of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
- b. Allowable leakage in gallons per hour for pipeline shall not be greater than that determined by the following formula.

$$L = \frac{SD\sqrt{P}}{148,000}$$

L=Allowable leakage in gallons per hour.

S=Length of pipeline tested, in feet.

D=nominal diameter of the pipe, in inches.

P=Average test pressure during the hydrostatic test, in pounds per square inch (gauge).

- c. Leakage is defined as the quantity of water to be supplied in the newly laid pipe or any valved section under test, which is necessary to maintain the specified leakage test pressure after pipe has been filled with water and the air expelled.
- d. Flanged pipe shall be "bottle tight."

4. Repairs or Replacement:

- a. If the pipeline fails to meet the hydrostatic test, the Contractor shall find the cause for the failure and make repairs or replacement, and repeat the test.

B. Disinfection:

- 1. Before being placed in service, all new pipe lines which will carry potable water or any valved sections thereof shall be disinfected to guard against a contaminated water supply. Disinfection shall be accomplished in accordance with the provisions of AWWA Specification C651, latest revisions and the Standard Specifications for Water and Sewer Main Construction in Illinois. Where conflicts between the two specifications exist, the more stringent specification shall apply. Sampling shall be accomplished in accordance with the provisions set forth by the Illinois Environmental Protection Agency. In the process of disinfecting newly laid pipe, valves and other appurtenances shall be operated while the pipe line is filled with the disinfection agent. Following disinfection, all treated water shall be thoroughly flushed from the newly laid pipe at its extremity until the replacement water throughout its length shall, upon test, both chemically and

bacteriologically, be proved equal to the water quality served the public from the existing water supply.

2. Should the initial treatment fail to result in satisfactory results, as specified above, the original disinfection procedure will be repeated until satisfactory results are obtained. The results of laboratory examination by the Illinois Environmental Protection Agency or other State certified laboratory shall be conclusive in determining whether or not the water quality is acceptable. Any repeated chlorination attempts shall be at the Contractor's expense.

C. Disposal of Water

1. The Contractor shall be responsible for properly disposing of flushed water during the pressure testing and disinfection of the water main. This work shall be coordinated with the City of Aurora. Flushed water shall have a chlorine residual that is satisfactory to the City of Aurora.

- D. The existing water main shall remain in service until all tests have passed and the new water main has been disinfected. Testing and disinfection are subject to approval by the Engineer and the City of Aurora.

Measurement and Payment: Measurement of all piping shall be along its centerline on a lineal foot basis to the nearest 6" increment unless otherwise specified on the plans. No additions or deductions for fittings and bends will be made.

Payment for water main shall be made at the contract unit price per lineal foot of DUCTILE IRON WATER MAIN 16". Payment shall be full compensation for excavation, polyethylene wrap, installation of pipe, fittings, corporation stop fittings, dewatering, backfilling and compaction of excavated materials, shut-downs, pressure testing, chlorination, connections, abandonment of existing water mains, and for all labor materials, equipment, and incidentals as shown on the plans and as specified herein to construct a complete and operational water main.

Payment for vaults shall be made at the contract unit price per each VALVE VAULTS, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID. Payment shall be full compensation for all labor, materials, equipment, and incidentals as shown on the plans and as specified herein for a working system.

Payment for fire trench backfill shall be made at the contract unit price per cubic yard of TRENCH BACKFILL. Payment shall be full compensation for all labor, materials, equipment, and incidentals as shown on the plans and as specified herein for a working system.

CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 11V FRAME AND GRATE

This work shall be completed according to Section 602 of the Standard Specifications and as noted herein.

Where a continuous grade is carried across an inlet or catch basin casting, the open vane cover shall be used, Neenah No. R-3286-8V grate or East Jordan 7520 T1.

FIRE HYDRANTS TO BE ADJUSTED

This item consists of vertically adjusting fire hydrants where called for on the plans or as directed by the Engineer. The fire hydrants shall be adjusted vertically to meet the proposed final grade. Any fire hydrant damaged by the Contractor shall be repaired at his/her own expense.

Basis of Payment: This work shall be paid for at the contract unit price each for FIRE HYDRANTS TO BE ADJUSTED, which price shall include all labor, materials, and equipment to complete the work in accordance with the plans and the Special Provisions.

GUARDRAIL MARKERS, TYPE A

This work shall consist of the installation of prismatic barrier reflectors on guardrail at locations shown in the plans or directed by the Engineer. This work shall be completed according to Section 782 of the Standard Specifications and as noted herein.

Prismatic barrier reflectors shall be affixed to new STEEL PLATE BEAM GUARDRAIL, of the type and post height specified and attached per IDOT highway standard 635011-02.

Markers shall be spaced evenly between the posts at 100' centers.

Method of Measurement: This work shall be measured for payment per each marker installed.

Basis of Payment: This work shall be paid for at the contract unit price per each GUARDRAIL MARKER, TYPE A installed.

TERMINAL MARKER – DIRECT APPLIED

This work shall consist of the installation of prismatic barrier reflectors on traffic barrier terminals at locations shown in the plans or directed by the Engineer. This work shall be completed according to Section 782 of the Standard Specifications and as noted herein.

Prismatic barrier reflectors shall be affixed to new TRAFFIC BARRIER TERMINAL, of the type specified and attached per IDOT highway standard 635011-02.

Method of Measurement: This work shall be measured for payment per each marker installed.

Basis of Payment: This work shall be paid for at the contract unit price per each TERMINAL MARKER – DIRECT APPLIED installed.

WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE

Created: July 29, 2002

Modified: December 3, 2010

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

Delete Article 253.11 and substitute the following:

Within 48 hours after planting, mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 4 inches (100 mm). No weed barrier fabric will be required for tree and shrub planting. Pre-

emergent Herbicide will be used instead of weed barrier fabric. The Pre-emergent Herbicide shall be applied prior to mulching. Mulch shall not be in contact with the base of woody stems or trunks.

Materials: The pre-emergent granular herbicide (Snapshot 2.5 TG or equivalent) shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least seventy-two (72) hours prior to application.

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

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

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

Basis of Payment: This work will be paid for at the contract unit price per pound (kilogram) of WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE which price shall include all materials, equipment, and labor necessary to complete the work as specified.

MICRO-PILES

Description: This work shall consist of designing, furnishing and installing the proposed micropiles according to the contract plans, approved shop drawings, and the Special Provisions. The term micropiles is used generically in this specification to refer to any proprietary system able to satisfy this specification and the contract plans. Systems that may satisfy this specification are Pin-Piles, Mini-Piles, Root-Piles, Needle-Piles or other systems.

The Contractor shall be responsible for selecting the micropile type, installation method, bond lengths, grout pressures, etc., such that the micropiles will satisfy the compressive and tension design loads indicated on the contract plans. The Contractor shall demonstrate the micropile capacities by performing micropile proof test loadings that satisfy the acceptance criteria of this Special Provision.

Submittals: The Contractor selected to perform this work shall satisfy the qualification requirements and will be required to provide shop drawings for the proposed micropile installation.

- (a) Qualifications: The Contractor performing the work shall be experienced in the design, construction and testing of micropiles. The Contractor shall have successfully installed a total of at least 100 micropiles on no less than five (5) different projects completed within the last five (5) years of similar project conditions and capacities to those required on this project.

The Contractor shall assign a field supervisor with experience on at least three (3) projects of similar scope to this project, completed over the past five (5) years. The on-site foreman and drill rig operators must have completed three (3) projects within the last five (5) years involving micropiles of equal or greater capacity than required on this

project. The Department may suspend the micropile work if the Contractor substitutes unqualified personnel, and the Contractor shall be liable for additional costs resulting from the suspension.

The above experience qualifications list and personnel list shall be submitted for approval prior to start of work on this item.

(b) Shop Drawings: At least five weeks before work is to begin, the Contractor shall submit to the Engineer for review and approval, complete shop drawings and design calculations describing the micropile system, or systems, intended for use. The micropiles and anchorage head assembly shall be designed and detailed to carry the tension and compression loadings indicated on the contract plans. The submittal shall be sealed by an Illinois Licensed Structural Engineer and include (as a minimum) the following:

1) Design Calculations:

- a) A written summary report that describes the overall micropile design.
- b) Applicable code requirements and design reference literature used.
- c) Micropile design cross-section(s) geometry including casing, soil/rock strata, piezometric levels, and magnitude as well as direction of design loadings.
- d) Design criteria including soil/rock shear strengths (friction angle and cohesion), unit weights, ground/grout bond values, micropile drilled hole diameter, and assumptions for each soil/rock strata.
- e) Resistance factors (Φ) used on the ground to grout bond.
- f) Structural design calculations sizing the proof testing load frame, reaction piles and connections to both the reaction piles and micropiles. Geotechnical calculations shall also be submitted to indicate that the factored resistance available is greater than or equal to the factored loads for the reaction piling.

2) Shop Drawings including the following:

- a) Plan view of the project showing:
 1. All proposed micropiles with each labeled with a unique identification number.
 2. Locations of subsurface exploration borings plotted and labeled.
 3. Proposed overall sequence of construction.
 4. Locations of micropiles to be proof tested.
- b) Elevation view of project showing:
 1. The location of the substructure units and all soil boring data plotted with all major changes in soil type or stratification identified.
 2. The proposed micropile lengths plotted at each substructure unit as well as the bottom of casing, top of bonded length, total length and final tip elevations indicated.
- c) All general notes for constructing the micropiles.
- d) Micropile typical section showing:
 1. The proposed typical micropile configuration(s) including steel casing, tension reinforcement sizes, and average grouted diameters (in both the cased and bonded lengths).
 2. Step by step installation procedure(s) including casing advancement, grouting elevations, re-grouting, etc.
 3. Tension reinforcement centralizers and spacer locations and details.
 4. Casing splice details.
- e) Anchorage head assembly detail including tension reinforcement connection and required weld sizes.
- f) Any revisions to details shown on the contract plans necessary to accommodate the micropile system intended for use.
- g) Micropile proof testing sheet showing:

1. Load frame and reaction pile connection for proof testing production piles.
 2. Additional tension reinforcement and grout strength required for proof test reaction piles.
 3. Jack, pressure gauge and load cell calibration curves.
- h) The grout mix design and procedures for monitoring and recording the grout depth, volume and pressure during the grouting process.

Work shall not start on any micropile, nor shall materials be ordered, until the shop drawings have been approved in writing by the Engineer. Such approval shall not relieve the Contractor of any responsibility under this contract for the successful completion of the work.

Materials: The materials used for the construction of the micropiles shall satisfy the following requirements:

- (a) Reinforcement Steel: Micropiles reinforcement shall consist of single or multiple elements of 75 ksi (fu) high strength threadbars or deformed bars conforming to ASTM A615.
- (b) Steel Couplers: Steel couplers shall be capable of developing 95 percent of the minimum specified ultimate tensile strength of the tension reinforcement steel.
- (c) Grout: The grout shall consist of a neat cement or sand cement mixture of Type II, III or V portland cement conforming to Section 1020 of the Standard Specifications. Expansive admixtures may not be used except to seal the encapsulations and anchorage covers. Admixtures shall be to control bleed, improve flowability, reduce water content, and retard set may be used if approved by the Engineer. Accelerators and admixtures containing chlorides are not permitted.
- (d) Fine Aggregate: If sand-cement grout is used, sand shall conform to the requirements for fine aggregates according to Section 1003 of the Standard Specifications.
- (e) Spacers: Spacers for separation of elements of a multi-element tension reinforcement shall permit the free flow of grout. They shall be fabricated from plastic, steel or material which is not detrimental to the reinforcement. Wood shall not be used. Spacers shall be placed along the total length of the micropile so that the steel will bond to the grout. They shall be located at 10 feet maximum centers with the upper one located a maximum of 5 feet from the top of the micropile and the lower one located a maximum of 5 feet from the bottom of the bonded length.
- (f) Centralizers: Centralizers shall be fabricated from plastic, steel or material which is not detrimental to the reinforcing steel. Wood shall not be used. Centralizers shall be able to maintain the reinforcement position and alignment so that a minimum of 1.5 inches of grout cover is obtained at all locations along micropile length. They shall be located at 5 feet maximum centers with the lower one located one foot from the bottom of the bonded length.
- (g) Anchorage head assembly: The materials properties, dimensions, and design details for the micropile anchorage head assembly components proposed by the Contractor to transfer the tension and compression design loads from the micropile to the footing shall be submitted for approval as part of the shop drawings. Anchorage components may include bearing plates, shear studs, anchorage rebars, and other approved components.
- (h) Permanent steel casing: Permanent steel casing shown on the contract plans has been designed to withstand lateral and vertical forces. Any changes to this casing shall be submitted to the Department for review and approval. Spiral weld pipe will not be permitted.

- (i) API N-80 Mill Prime casing shall be used. Mill secondary casing will not be allowed

Construction Requirements: The soil conditions for this project are represented by the boring information shown on the plans. The Contractor, utilizing his/her expertise, shall be responsible for interpreting the data, as he/she feels necessary to be fully familiar with the existing conditions in order to design, install and successfully test the micropiles as specified. Variations in geologic deposits, overburden materials, ground water elevations, etc., may occur between borings and may not necessarily be considered a change in site conditions as defined by Article 104.03 of the Standard Specifications.

The drilling method used may be rotary drilling, percussion drilling or an approved alternate. The method of installation used shall be that which prevents loss of ground around the drilled hole that may be detrimental to the structure. The drillhole must be open along its full length at the design minimum drillhole diameter prior to placing reinforcement and grout. Temporary casing or other approved method of micropile drillhole support will be required in caving or unstable ground to permit the micropile shaft to be formed to the minimum design drillhole diameter.

The Contractor shall notify the Engineer if an obstruction is encountered. An obstruction is defined as any object (such as, but not limited to, boulders, logs, old foundations etc.) that cannot be drilled through using normal casing advancement techniques. Upon concurrence of the Engineer, the Contractor shall begin working to core, break up, push aside, or remove the obstruction unless relocating the micropile would be less expensive. Tools or equipment lost below grade by the Contractor shall not be defined as obstructions. Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

Casing may be any type of flush joint steel of the nominal diameter shown on the plans and appropriate lengths. The casing must be capable of advancing the hole through the soil strata as indicated in the boring data or any other data the Contractor may have obtained.

The reinforcement shall be placed prior to grouting and before the temporary casing is withdrawn. The reinforcement shall be inserted to the desired depth without undue stress or difficulty (not driven or forced). When the reinforcement cannot be completely inserted it shall be removed and the drill hole cleaned or re-drilled to permit insertion. The reinforcement shall be free of soil, grease, or oil that might reduce the grout to bar bond.

The micropiles shall be grouted the same day the load transfer bond length is drilled. Grout used for grouting shall be free of any lumps and undispersed cement. The grout volumes and pressures shall be measured and recorded during the placement operation. The pump shall be equipped with a grout pressure gauge at the pump and a second gauge placed at the point of injection at the top of the casing to monitor grout pressures. The gauges shall be capable of measuring pressures of at least 150 psi or twice the actual grout pressures used, whichever is greater. The grout shall be kept in agitation prior to mixing and placed within one hour of mixing. The grouting equipment shall be sized to enable each pile to be grouted in one continuous operation. The grout shall be injected from the lowest point of the drillhole (through grout tubes, casing, drill rods, etc.) and continued until uncontaminated grout flows from the top of the micropile. Temporary casing, if used, shall be extracted in stages ensuring that, after each length of casing is removed, the grout level is brought up to ground level before the next length is removed. The casing or tremie pipe must always extend below the level of the grout in the drillhole. Upon completion of grouting, the grout tube or access valve may remain in the drill hole and anchorage head assembly provided it is filled with grout. The grout take and pressure shall be controlled to prevent any heave of the ground surface or foundations.

The following construction tolerances shall apply to all production micropiles:

- (a) The center of the micropile casing shall be within 3 inches of the plan station and offset.

- (b) The out of vertical plumbness of the vertical shafts shall not exceed 2.0% and the deviation of batter from that specified in the plans for battered piles shall not exceed 2.0%.
- (c) The top of the casing shall be no more than 1 inch above and no more than 2 inches below the plan elevation.

Micropile Proof Load Test. The Contractor shall install a set of production micropiles at a substructure unit designated to have a proof test loading, prior to the installation of the remaining production micropiles in that unit or other substructure units covered by that proof test. A set of production micropiles is defined as the number of micropiles required to proof test a production micropile and provide the proof test frame reaction capacity.

The load testing shall be performed by incrementally loading the micropiles according to ASTM D 1143 for the compression loading and ASTM D 3689 for the tension loading except as modified herein. Testing shall not take place until the grout has acquired sufficient strength to preclude crushing during application of the test loadings.

The micropiles tested shall have "tell tale" rods installed in sleeves to the bottom of the casing and to the tip of the micropile allowing readings to be taken to give indications of how much load is resisted by the different segments of the micropile. Other instrumentation such as strain gauges may also be used as an alternative to the tell tales and shall be approved by the Engineer. The micropile movement shall be measured and recorded to the nearest 25 micron (.001 inch) with respect to an independent fixed reference point immediately prior to loading and for each increment of load.

The test loads shall be applied and measured with a hydraulic jack and pressure gauge. The pressure gauge shall be graduated in 72 psi increments or less. The jack and pressure gauge shall have a pressure range not exceeding twice the anticipated maximum test pressure. Jack ram travel shall be sufficient to allow the test to be done without resetting the equipment. The creep test load hold shall be monitored during testing with both the pressure gauge and electronic load cell. The load cell shall be used to accurately maintain a constant load hold during the creep test load hold increment of the testing.

The jack shall be positioned at the beginning of the test so that unloading and repositioning during the test will not be required. When both compression and tension loading is to be performed, it shall be performed on the same micropile and the compression loading shall be conducted first. Dial gauges capable of measuring displacements to 0.025 mm (.001 inch) shall be used to measure micropile movement of the jack from an independent reference point. If the test setup requires reaction against the ground or a single row of reaction piles, two gauges shall be used on either side of the micropile. The reaction frame and piles shall be adequately stiff to prevent excessive deformation, misalignment or racking under peak loading. The stressing equipment shall be placed over the micropile in such a manner that the jack, load cell, and load test reaction frame are axially aligned with the anchorage head assembly reinforcement. Gauges shall have adequate travel so the total micropile and tell tale movements can be measured without resetting the devices.

The proof test Design Load shall be taken as the maximum compression and maximum tension loadings indicated at any substructures covered by that proof test, shown on the contract plans. The loadings shall be incrementally applied according to the following cyclic load schedule shown below:

Proof Test Loading Schedule

Increment	Loading Applied	Increment	Loading Applied
1	0.05 Design Load	5	1.00 Design Load
2	0.25 Design Load	6	1.33 Design Load
3	0.50 Design Load	7	1.67 Design Load
4	0.75 Design Load	8	0.05 Design Load

In the event that a production micropile fails the proof test acceptance criteria, the Contractor shall re-evaluate his/her design and construction procedures, make the necessary changes and install an additional non-production micropile and additional anchor pile(s), outside the proposed footing and proof test the revised micropile. The above process shall be repeated until a successful micropile passes the acceptance criteria. The set of production micropiles installed as part of the failed proof test shall be cut flush with the bottom of the footing and supplemented by micropiles installed using improved design and installation methods adjacent to the failed micropiles.

Upon the completion of each successful micropile proof load test, the remaining production micropiles in that substructure unit and other substructure units covered by that proof load test can be installed using the same successful design and installation.

Basis of Payment: This work will be paid for at the contract unit price each for MICROPILES, and shall be compensation in full for designing, furnishing and installing the production micropiles incorporated in the final structure, according to the contract plans, approved shop drawings, and the Special Provisions.

Micropile proof test loading of selected production micropiles shall be paid at the contract unit price each for MICROPILE PROOF LOAD TEST and shall be compensation in full for installing the anchor piles, reaction frame, applying the test loads, and providing reports and appropriate documentation.

The cost of any failed load test(s), supplemental or additional anchor piles, or micropiles cut flush with the bottom of the footing will not be measured for payment, but shall be included with the successful micropile proof test loading.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

SANITARY SEWER REMOVAL

This work shall consist of the removal of existing sanitary sewer of the size specified at locations denoted on the plans. The existing sanitary sewer is not to be removed until such time as the final connections can be made.

Removal of existing sanitary sewer shall be performed in accordance with Section 551 of the Standard Specifications, except that instead of storm sewers, this work shall consist of removal of existing sanitary sewers as directed by the Engineer. Salvaged pipe will not be allowed to be reused on the job and shall be disposed of according to Article 202.03

Method of Measurement: This work will be measured for payment per foot of SANITARY SEWER REMOVAL of the size specified.

Basis of Payment: This work will be paid for at the contract unit price per foot of SANITARY SEWER REMOVAL of the size specified, which price shall include all equipment, labor, and disposal of existing sanitary sewer.

OUTLET SPECIAL

This work shall consist of the constructing of concrete curb and gutter outlets according to the details shown on the plans or as directed by the Engineer. This work shall conform to the appropriate articles of Section 606 of the Standard Specifications.

Method of Measurement: This work shall be measured for payment per each OUTLET SPECIAL.

Basis of Payment: This work will be paid for at the contract unit price per each OUTLET SPECIAL constructed, which price shall include all equipment, labor, and material necessary to construction the outlet.

WATERMAIN MANHOLES TO BE ADJUSTED

This work shall be in accordance with Section 602 of the Standard Specifications insofar as applicable and the following provisions:

This item consists of the adjustment of watermain manhole frames and lids to proposed grade. All adjustments shall be made using precast reinforced concrete adjustment rings. A maximum of 2' of rings will be permitted.

Method of Measurement: This work will be measured for payment as each for each WATERMAIN MANHOLES TO BE ADJUSTED.

Basis of Payment: This work will be paid for at the contract unit price each for WATERMAIN MANHOLES TO BE ADJUSTED, which price shall include resetting the frame with lid, excavation, and backfill.

CURED-IN-PLACE PIPE LINER, 18"

Description: This work shall consist of installing a cured-in-place pipe liner of the size specified into existing sewer at locations called out on the plans.

Prior to the start of any work:

- 1) The existing sewer shall be televised by a tracked robotic camera no faster than 1 foot per second in order to assess its condition. The distance the camera has traveled from the manhole shall be visible on the video. Once completed, a copy of the pre-lining DVD shall be submitted to Fox Metro Water Reclamation District at 1135 S. Lake Street Montgomery, IL and the Resident Engineer for review.
- 2) The existing sewer shall be hydro-jet cleaned to remove all debris prior to insertion of the pipe liner.
- 3) The proposed lining shall be installed.
- 4) After complete installation of the pipe liner, the existing sewer shall be televised. The post-lining DVD shall be immediately submitted to Fox Metro Water Reclamation District and the Resident Engineer.

Contact Fox Metro Water Reclamation District at 630-301-6805 with any questions or concerns prior to, or during construction.

Materials: The cured-in-place pipe liner shall meet the requirements of ASTM F1216, D5813, D790, and D2990. Liner shall be installed using the inversion method only, utilizing a permeable liner material. In addition, liner resin shall be cured by hot water or steam (thermo-set) only. Any services shall be robotically cut.

Method of Measurement: This item shall be paid for at the contract unit price per foot for CURED-IN-PLACE PIPE LINER, of the size specified.

Basis of Payment: This item shall be paid for at the contract unit price per foot for CURED-IN-PLACE PIPE LINER, of the size specified. Payment shall include all televising of the existing sewer, materials, labor, and equipment necessary to complete the work as specified.

DRAINAGE STRUCTURES

Description: This item shall be constructed in accordance with the details and notes shown in the construction plans. The contractor has the option to provide a pre-cast structure or a cast-in-place structure.

Submittals: Shop drawings and design calculations shall be submitted to the Engineer. All submittals shall be sealed by an Illinois Licensed Structural Engineer and include all details, dimensions, quantities and cross sections necessary to construct the drainage structures.

Materials: Structure shall be designed in accordance with AASHTO LFRD Design Specifications and Section 503 and Section 504 of the Standard Specifications. Structures shall be designed for HS20-44 loading. Concrete shall be Class SI for cast-in-place structures and Class PC for pre-cast structures.

Basis of Payment: This item will be paid for, regardless of which option is used to construct the structure, at the contract unit price per each for DRAINAGE STRUCTURE, NO. 1 and DRAINAGE STRUCTURE, NO. 2, payment shall include all items as detailed in the plans including precast sections, cast-in-place portions, precast risers, frames and grates, porous granular bedding material and excavation and all labor, tools, equipment and incidentals required to complete the work as specified.

CONSTRUCTION VIBRATION MONITORING

Construction Vibration Monitoring shall be required for the existing 18" diameter sanitary sewer located at approximate station 111+20 and the existing 36" diameter transmission main located at approximate station 108+18. The Contractor, under the supervision of the Engineer, shall conduct a pre-construction survey of the existing 18" diameter sanitary sewer within 25 feet of the pile driving operation at SN 045-9942, and a pre-construction survey of the 36" diameter transmission main within 25 feet of the micropile installation at the protection system, and shall include location and description of major defects, with photographic or videographic record of the same. A copy of the report shall be submitted to the Engineer, the City of Aurora and Fox Metro Water Reclamation District prior to commencement of driving piles.

Vibration Limitation and Recordings. The Contractor shall furnish, install, calibrate, maintain and operate instrumentation for measuring and recording vibrations. The recording instruments shall be a velocity seismograph. Additional instruments shall be provided as necessary to evaluate propagation of vibrations. At least one instrument shall be available at each structure. All instruments shall be periodically checked for proper calibration and shall be maintained in first-class working order. Instruments shall be replaced, repaired or re-calibrated when needed or when directed by the Engineer. The recordings shall be taken under the supervision of a qualified engineer. In addition, the engineer shall interpret the readings and shall establish the vibration limitations at the various locations, but under no circumstances shall the limit exceed the value as discussed below, or such lesser limit as established by ordinance or regulation.

Prior to commencement of pile driving operations, the Contractor shall submit in writing for approval of the Engineer, his plan for monitoring his operations to assure compliance with the vibration limitation. As a minimum, this plan shall provide for the following:

- a. Recommended vibration limitation at each site based on survey establishing proximity of structures, type of structure, and condition of structure.
- b. Vibrations shall be recorded by the seismograph equipment at each Fox Metro Water Reclamation District underground structure where pile driving operation is taking place.

- c. Trained personnel shall be provided to operate the equipment and interpret the recordings. Names and resumes of personnel shall be furnished.
- d. All pile driving operations shall be done in such a manner as to reduce vibrations which reach adjacent structures and facilities to or below acceptable limits as established by the Contractor, but which shall not exceed the limits as specified below.

Acceptable limits are defined as follows:

- a. 0.2 inch per second at a frequency 1 Hertz.
- b. 0.5 inch per second at frequencies between 2.6 Hertz and 40 Hertz.
- c. Velocities less than that defined by a straight line variation between 1 Hertz and 2.6 Hertz, per (a) and (b) above.
- d. 0.75 inch per second at frequencies above 40 Hertz.

A qualified engineer shall be provided by the Contractor. This person's responsibilities shall include the following:

- a. Supervise establishment of the program and initial operation of the equipment.
- b. Visit the job at regular intervals, more often if requested by the Engineer.
- c. Inspect the recording program and interpretation of records, check the operations and recalibrate the equipment if necessary.
- d. Provide the Engineer with a comprehensive written report of the vibration measuring program and an analysis of the impact recordings within 7 days after completion of the pile driving operations.

In the event any recordings indicate a caution or danger classification is being approached, all pile driving operations shall be suspended immediately, and a report shall be made immediately to the Engineer. The Contractor shall reduce the efforts for driving the piles, or otherwise cause appropriate measures to be taken to reduce the resulting vibrations to the safe limits.

Damage sustained during pile driving operations which is within the acceptable limits set in this special provision shall be paid for utilizing a force account. Should any damage occur during pile driving operations which are outside of the acceptable limits shall be the contractor's responsibility and no additional compensation shall be made.

Basis of Payment: All materials, labor, and equipment necessary to perform the work as specified herein shall be included in the contract unit price per Lump Sum for CONSTRUCTION VIBRATION MONITORING.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Effective: April 1, 2001

Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

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

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

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

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

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

Add the following to Article 402.12 of the Standard Specifications:

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

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

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

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

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.
- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.”

AGGREGATE SHOULDER REMOVAL

This work shall be performed in accordance with the applicable portions of Section 202 of the Standard Specifications.

Method of Measurement: AGGREGATE SHOULDER REMOVAL shall be measured for removal per cubic yard.

Basis of Payment: This work shall be paid for at the contract unit price per cubic yard of AGGREGATE SHOULDER REMOVAL.

CLEANING EXISTING DRAINAGE STRUCTURES

Effective: September 30, 1985

Revised: December 1, 2011

All existing storm sewers, pipe culverts, manholes, catch basins and inlets shall be considered as drainage structures insofar as the interpretation of this Special Provision is concerned. When specified for payment, the location of drainage structures to be cleaned will be shown on the plans.

All existing drainage structures which are to be adjusted or reconstructed shall be cleaned in accordance with Article 602.15 of the Standard Specifications. This work will be paid for in accordance with Article 602.16 of the Standard Specifications.

All other existing drainage structures which are specified to be cleaned on the plans will be cleaned according to Article 602.15 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price each for DRAINAGE STRUCTURES TO BE CLEANED, and at the contract unit price per foot (meter) for STORM SEWERS TO BE CLEANED, of the diameter specified.

WATER MAIN REMOVAL

Description of Work: The existing water main is to be removed after the new main is complete and all services have been transferred. Where the main is disconnected from its live sources it shall be drained and cleanly cut so as to remove the existing water main pipe in its entirety.

Removal of existing water mains shall be performed in accordance with Section 551 of the Standard Specifications, except that instead of storm sewers, this work shall consist of removal of existing water mains as directed by the Engineer. Salvaged pipe will not be allowed to be reused on the job and shall be disposed of according to Article 202.03

Method of Measurement: This work shall be measured for removal per foot of WATER MAIN REMOVAL, of the size specified from manhole to manhole.

Basis of Payment: This work shall be paid for at the contract unit price per foot for WATER MAIN REMOVAL, of the size specified. No additional compensation will be made for the removal of bends, elbows, tees, or any other associated appurtenances.

CUT AND CAP EXISTING 12" WATER MAIN

All work shall be in accordance with latest editions of the IDOT Standard Specifications for Road and Bridge Construction in Illinois, IEPA Standards and Specifications for Soil Erosion and Sediment Control, Standard Specifications for Water and Sewer Main Construction in Illinois, State of Illinois plumbing code, and OSHA safety standards.

Prior to cutting of the existing water main, flow shall be stopped to the existing water main and drained. Cutting of the pipe and placement of the cap shall be done in a workmanlike manner without damage to the pipe. Upon completion of the capping of the water main, the capped line shall be repressurized and inspected for leaks. Should deficiencies appear, flow shall be ceased and the cap shall be reinstalled.

Backfilling of the trench shall not be permitted until the Engineer has approved the capped water main.

Method of Measurement: This work will be measured for payment as each CUT AND CAP EXISTING 12" WATER MAIN.

Basis of Payment: This work will be paid for at the contract unit price each for CUT AND CAP EXISTING 12" WATER MAIN, which price shall include all labor, materials, and equipemtn.

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

This work shall consist of constructing manholes, together with the necessary cast iron frames and lids, in accordance with Section 602 of the Standard Specifications and the details included in the plans, except as specified herein.

Sanitary Sewer Manholes constructed at the locations indicated on the plans shall be provided with rubber gasket couplings for all pipes to ensure a watertight seal between the pipe and manhole. The rubber gasket couplings shall conform to ASTM Specification C-923. Manholes shall be provided with steel reinforced plastic steps (or approved equal) on 16" centers from frame to invert. The outside of the manhole shall be coated with a waterproofing membrane and exterior chimney seals shall be provided in accordance with ASTM C-923. The rubber gasket couplings, waterproof coating, chimney seal, and stops shall be included in the cost of sanitary manholes and will not be paid for separately.

Manholes constructed in a location where an existing manhole was removed shall include five feet of pipe for each existing pipe location. Sanitary sewer pipe shall be PVC, RCP or ductile iron in accordance with the Special Provisions included herein, and connections shall be made with mission couplings. The pipe, collar, and trench backfill shall be included in the cost of sanitary manholes and will not be paid for separately.

Manholes constructed with an invert elevation difference of 2 feet or more will require an external drop structure in accordance with the City of Aurora and Fox Metro Water Reclamation District standards. The external drop structures shall be included in the cost of sanitary manholes and will not be paid for separately.

In paved areas manhole castings shall be Neenah No. R1713 frame and Type B cover or east Jordan 1051-3. In other non-paved areas, where closed lids are needed, use Neenah No. R-1772-B or East Jordan 1022-1 (medium cover). All type B covers shall have "City of Aurora" cast into the top and shall be concealed pick hole type. All type B covers shall have a machined surface a watertight rubber gasket seal.

Lids for sanitary manholes shall have the word "SANITARY" cast into them.

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

SANITARY MANHOLES TO BE ADJUSTED

This work shall be in accordance with Section 602 of the Standard Specifications insofar as applicable and the following provisions:

This item consists of the adjustment of sanitary manhole frames and lids to proposed grade.

All adjustments shall be made using precast reinforced concrete adjustment rings. A maximum of 2' of rings will be permitted.

Method of Measurement: This work will be measured for payment as each SANITARY MANHOLES TO BE ADJUSTED.

Basis of Payment: This work will be paid for at the contract unit price each for SANITARY MANHOLES TO BE ADJUSTED, which price shall include resetting the frame with lid, excavation, and backfill.

SANITARY MANHOLES TO BE REMOVED

This work shall be in accordance with Section 605 of the Standard Specifications insofar as applicable and the following provisions:

Method of Measurement: This work will be measured for payment as each for each SANITARY MANHOLES TO BE REMOVED.

Basis of Payment: This work will be paid for at the contract unit price each for SANITARY MANHOLES TO BE REMOVED, which price shall include removal and disposal of the frame with lid, excavation, and backfill necessary to backfill to proposed grade.

VALVE VAULTS TO BE REMOVED

This work shall consist of the removal or the partial removal below grade and the disposal of a valve vault including valves in accordance with Section 605 of the Standard Specifications and as directed by the Engineer.

If the outlet and inlet pipes are not being removed but are to be abandoned, then this work shall also include sealing the pipe ends. Filling the hole left by the removal of the valve vault with an approved trench backfill material is included as part of this work.

Basis of Payment: This work shall be paid for at the contract unit price per each for VALVE VAULTS TO BE REMOVED.

VALVE BOXES TO BE REMOVED

This work shall consist of the removal or the partial removal below grade and the disposal of a valve box including valves in accordance with Section 605 of the Standard Specifications and as directed by the Engineer.

If the outlet and inlet pipes are not being removed but are to be abandoned, then this work shall also include sealing the pipe ends. Filling the hole left by the removal of the valve box with an approved trench backfill material is included as part of this work.

Basis of Payment: This work shall be paid for at the contract unit price per each for VALVE BOXES TO BE REMOVED.

RUB RAIL

This work shall be performed in accordance with the applicable portions of Section 631 and Article 1006.04 of the Standard Specifications.

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

RETAINING WALL REMOVAL

Description: This work shall consist of furnishing all labor, tools, and equipment necessary for the partial removal and disposal of the existing sheet piling retaining wall to the limits shown on the Plans or as directed by the Engineer. This work shall be completed in accordance with the applicable portions of Section 501 of the Standard Specifications, particularly Section 501.05 regarding partial removal of structures, and as noted herein.

The portion of the existing wall to be removed shall be removed in such a manner as to leave the portion to remain undamaged and in proper condition. Any damage to the portion of the remaining wall to remain shall be repaired by the Contractor at his/her expense.

After removal operations are complete, final end treatment and earth shaping shall be completed to the satisfaction of the Engineer.

Method of Measurement: Retaining Wall Removal shall be measured for payment per foot.

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

REMOVE EXISTING STONE ARCH AND WINGWALLS

This work shall be performed in accordance with the applicable portions of Section 501 of the Standard Specifications.

Method of Measurement: Removal of the existing stone arch and wingwalls shall be measured on a per each basis and shall include removal of all foundations, aprons, headwalls and wingwalls.

Basis of Payment: This work shall be paid for at the contract unit price per each REMOVE EXISTING STONE ARCH AND WINGWALLS, regardless of the size of the headwall.

FURNISHING AND ERECTING PRECAST CONCRETE PANELS, STRUCTURE 1

Description: This work shall consist of providing all labor, materials, and equipment necessary to furnish and erect precast concrete panels, including the concrete and reinforcement steel. All work shall be according to the details shown on the plans and in accordance with Section 504 and 508 of the Standard Specifications except as modified herein.

Basis of Payment: The precast concrete panels and other material included in the scope of this item, furnished and installed, including all labor, materials and equipment, as specified here and in the plans, will be paid for at the contract unit price lump sum for FURNISHING AND ERECTING PRECAST CONCRETE PANELS, STRUCTURE 1.

FENCE REMOVAL

This work shall consist of the satisfactory removal of the existing fence and its appurtenances at locations shown in the plans or directed by the Engineer. This work shall be completed according to Section 201 of the Standard Specifications and as noted herein.

Method of Measurement: This work shall be measured for payment in feet, along the base of the existing fence.

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

REMOVE AND RESET ORNAMENTAL FENCE

This work shall consist of the satisfactory installation of new fence of the same type as the previously removed fence. This work shall be completed according to Section 201 of the Standard Specifications and as noted herein.

Method of Measurement: This work shall be measured for payment in feet, along the newly installed fence.

Basis of Payment: This work shall be paid for at the contract unit price per foot of FENCE (SPECIAL). No additional compensation shall be made for the fabrication of various types of new fence.

STORM SEWER ADJACENT TO OR CROSSING WATER MAIN

Effective: February 1, 1996

Revised: January 1, 2007

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

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

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

Basis of Payment: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be STORM SEWER, TYPE 2, WATER MAIN QUALITY PIPE, 12" or STORM SEWER, TYPE 2, WATER MAIN QUALITY PIPE, 15".

SANITARY SEWER

This work shall consist of constructing new sanitary sewer pipe at the locations shown on the plans or as directed by the Engineer. All new sanitary sewer pipes shall meet the criteria and standards of the Fox Metro Water Reclamation District.

The excavation, bedding, pipe laying, backfilling, and clean up shall be completed in accordance with the applicable portions of Divisions II and III of the Standard Specifications for Water and Sewer Main Construction in Illinois. The bedding for the pipe shall meet the criteria and standards of the Fox Metro Water Reclamation District. The cost for the bedding shall be incidental to the contract unit price for SANITARY SEWER of the diameter specified.

The proposed sanitary sewer shall be PVC (Polyvinyl Chloride) plastic pipe. All pipe and fittings shall conform to Type PSM (ASTM – SDR series) in accordance with ASTM D-1784, D-3034 for SDR 26, D-2241, D-3212, F-412 and F-477. . The Standard Dimension Ratio (SDR) for PVC pipe shall be 26 as a minimum and shall be dependent on the depth of cover. All PVC plastic pipes and fittings shall have a cell classification of 12454-B or C, as defined in ASTM D-1784.

Connections to existing sanitary sewer pipe shall be made with Band-Seal (Non-Shear) or approved equal couplings subject to the review of the Engineer. The Non-Shear couplings shall be equipped with stainless steel bands.

Trench bracing/protection shall be in accordance with Article 550.04 of the Standard Specifications and will not be measured for payment separately, but shall be included in the unit price for SANITARY SEWER of the diameter specified. The Contractor will be required to submit a plan for trench bracing/protection to the Engineer for approval prior to construction. Additional protection measures as may be required by the Engineer shall be considered as part of the work required for SANITARY SEWER installation, and shall be provided by the Contractor at no additional cost to the Department.

Excavations may require dewatering due to subsurface water, seepage and/or surface precipitation. All dewatering necessary to keep the sewer trench dry shall be included in the unit price for SANITARY SEWER of the diameter specified.

The Contractor will be required to televise the new sanitary sewer before final backfilling is performed. Payment for the new sanitary sewer will not be made until the City of Aurora and the Fox Metro Water Reclamation District has reviewed and accepted the condition of the new sewer.

Basis Of Payment: This work will be paid for at the contract unit price per lineal foot for SANITARY SEWER 10" or SANITARY SEWER 18". The lineal footage between the connections of the existing sanitary sewer will be measured in place for payment. Sanitary sewer constructed from manhole to manhole will be measured in place from the center of each manhole. The contract unit price shall include all labor, material, and equipment necessary to complete the work as specified. Trench backfill will be paid for separately at the contract unit price for TRENCH BACKFILL.

BITUMINOUS COATED AGGREGATE SLOPEWALL

Effective: January 1, 2007

This work shall consist of paving embankment slopes with crushed aggregate for control and prevention of erosion of slopes.

Material: The aggregate used for slope wall paving shall be crushed stone conforming to Article 1004.01 of the Standard Specifications for Class D quality except that one of the following options shall apply recycled concrete (RCC) or RAP material and shall meet the specification within the table. RAP containing steel slag will be permitted in sloopewall. Slag material meeting quality specification shall be approved for sloopewall application.

COARSE AGGREGATE

VIRGIN	RECYCLE CONCRETE	RAP	SLAG
Stone, Crush Gravel	Aggregate Subgrade	Capping Aggregate	ACBF / STEEL
CA01	019CM18	3 INCH	CA01

The aggregate shall be uniformly graded to meet the current gradation specification, recycle material shall be reasonable free of deleterious material: steel, wood, brick etc. RAP shall be free of contaminates and oversize particles.

The bituminous material used for slopewall sealing or spraying shall be RS-1, RS-2, RC70 or RC250 meeting the requirements of Section 1032 of the Standard Specifications.

Construction Requirements: The surface upon which the slopewall is to be constructed shall conform to the elevation, lines, grades, and cross section indicated on the plans and as directed by the Engineer. The subgrade shall be shaped to ± 1 inch (25 mm) of plan grade.

Prior to placing aggregate, the slope shall be compacted to a uniform density as directed by the Engineer. Excess excavated material shall be disposed of by the Contractor as provided in Section 502 of the Standard Specifications.

The crushed aggregate shall be placed on the prepared slope, shaped and compacted to the satisfaction of the Engineer. Bituminous material shall not be placed until the aggregate has dried to the satisfaction of the Engineer.

Bituminous material shall be applied at a rate sufficient to assure penetration into and the binding together of particles in the upper 2 inch (50 mm) of the crushed aggregate slopewall. The adjacent structure shall be protected from bituminous material to prevent spattering or discoloration.

Basis of Payment: This work will be measured and paid for at the contract unit price per square yard (square meter) for BITUMINOUS COATED AGGREGATE SLOPEWALL, of the thickness specified.

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

Effective: November 1, 2011

Revised: November 1, 2013

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

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

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

CONDUIT ATTACHED TO STRUCTURE, 4" DIA., GALVANIZED STEEL

Description: This item shall include the furnishing of all materials and the necessary labor to construct and erect the conduit attached to structure as specified on the plans and as herein.

Materials for the items shall be in accordance with Section 811 of the Standard Specifications.

Method of Measurement: This work shall be measured for payment per foot in accordance with Article 811.04 of the Standard Specifications.

Basis of Payment: The assemblies on the west side of the bridge for four (4) – 4" diameter PVC Coated Steel Conduit shall be included in the unit price for CONDUIT ATTACHED TO STRUCTURE, 4" DIA., PVC COATED GALVANIZED STEEL.

The two (2) – 4" diameter City of Aurora conduits shall be included in the unit price for CONDUIT ATTACHED TO STRUCTURE, 4" DIA., PVC COATED GALVANIZED STEEL, which price shall be full compensation for all labor, equipment and materials required for performing the work as herein specified and detailed on the plans.

The two (2) – 4" diameter AT&T conduit shall be furnished and installed by AT&T and NOT included in the unit price for CONDUIT ATTACHED TO STRUCTURE, 4" DIA., PVC COATED GALVANIZED STEEL.

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING (TPG)

Effective: August 1, 2012

Revised: February 1, 2014

In addition to the Contractor's equal employment opportunity affirmative action efforts undertaken as elsewhere required by this Contract, the Contractor is encouraged to participate in the incentive program to provide additional on-the-job training to certified graduates of IDOT funded pre-apprenticeship training programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at \$15.00 per hour for training given a certified TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements

in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for the TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this Special Provision.

Method of Measurement: The unit of measurement is in hours.

Basis of Payment: This work will be paid for at the contract unit price of \$15.00 per hour for certified TRAINEES TRAINING PROGRAM GRADUATE. The estimated total numbers 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 journey worker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is 2 trainees. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward

journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision \$15.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.

GUIDELINES FOR PREPARATION OF DEMOLITION PLANS FOR STRUCTURES OVER BURLINGTON NORTHERN SANTA FE RAILROAD

I. GENERAL

A. The Contractor's work shall in no way impede the train operations.

1. The words "demolition" and "removal" will be used interchangeably in this Guideline.
2. The term "Railroad" refers to the Railroad's Engineers or designated representative.

B. Safety takes precedence over productivity. The Contractor shall be responsible for planning and executing all procedures necessary to remove the structure in a safe, predictable manner.

1. All employees of the Contractor and Subcontractors must be Safety Trained. Refer to <http://www.railroadsafetytraining.com>

C. The Contractor shall develop a demolition plan ONLY AFTER CONSULTING WITH THE RAILROAD TO GET AN ESTIMATE OF THE RANGE OF TRACK WINDOWS THAT MIGHT NORMALLY BE AVAILABLE FOR THE JOB SITE.

1. A Track Window is the elapsed time between approaching trains.
2. An estimate of the availability of Track Windows can be used by the Contractor to design a demolition plan. The estimated Track Window is a guideline and not to be considered as a guarantee for available working time.
3. A Track Window is highly variable, depending on the location. Low speed - low train density tracks have predictable Track Windows. The opposite is true for high density- high speed main tracks. The Railroad can furnish a range of Track Windows that might be expected at a specific location under normal train traffic conditions.
4. Plan the demolition procedures based upon the smallest ESTIMATED Track Window. Do not assume the longest Track Window will be available on any given day. Do not assume the same Track Windows will be available from one day to the next.

D. The Railroad's tracks and property shall be protected at all times.

1. Removal procedures shall take into account SEVER WEATHER CONDITIONS, including high winds, heavy rains and snowfall accumulation.
2. The contractor shall ensure that all areas adjacent to active tracks shall remain free from hazards.
 - a) Trainmen must have an unobstructed walkway available parallel to all active tracks.
 - b) All open excavations shall be protected with fencing.
 - c) Do not store materials or equipment within 25 feet of the centerline of an active track.
3. Protect the project area from vandalism.
 - a) Do not leave debris where vandals could place it on the tracks to drop it onto the tracks from an overhead structure.
 - b) Secure all heavy equipment from potential movement by vandals.

c) Do not store flammable materials on railroad right of way. Remove combustible waste materials daily. Do not store fuel or other flammable liquids on railroad right of way.

E. All demolition materials and scrap shall be disposed of outside the Railroad right-of-way at no expense to the railroad. At the conclusion of the project, the area must be left in a clean and graded condition to the exclusive satisfaction of the Railroad.

F. No work is allowed within 25 feet of the nearest track unless protected by a Railroad Flagman. When trains approach the work site, all demolition activity within 50 feet of the track shall stop until the entire length of the train has passed the work site.

G. The staged demolition of any portion of a structure over or adjacent to operational tracks will not jeopardize the stability of other parts of the structure awaiting demolition.

1. Where multiple tracks are involved, the demolition plan should be engineered as much as practical such that no more than one track is rendered impassable at any given moment.

H. No blasting will be permitted on Railroad's right-of-way.

II. BRIDGE REMOVAL PLAN

A. The Contractor shall submit a detailed Bridge Removal Plan to the Railroad. The Bridge Removal Plan shall encompass the following:

- 1) Provide a scale drawing showing the plan view, elevation and location of the structure and locations of any access roads needed on railroad right of way to access the job site. The as-built drawings may be used for the submittal provided the removal steps are clearly marked and legible.
- 2) Indicate the position of all railroad tracks below the bridge. Identify each track as mainline, siding, spur, etc. Identify locations where temporary crossings will be installed to cross equipment over each track.
- 3) List in sequential order, all procedures necessary to remove the bridge in a safe and controlled manner. Include step by step details of each sequence and the elapsed time required to execute the sequence. The removal plan must specify which, if any, sequences will render a track impassable to trains during execution of the sequence. If more than one track is adjacent to the work area, specify which tracks will be impassable during execution of each sequence.
- 4) Include text, drawings or photos to communicate the types of equipment that will be utilized. Include diagrams showing the position of the equipment in relation to the tracks. Where cranes are to be used, furnish the lifting capacities of the crane at the anticipated radius and the weights of components to be removed.
- 5) For every sequence, specify the minimum horizontal clearance from centerline of track and the minimum vertical clearance above top of rail for equipment, falsework, rubble shields and temporary supports. If a crane is to be utilized, include clearances for the backswing radius of the crane counterweight and the position of the outriggers. (Refer to the attached frame protection diagram for the minimum allowable vertical and horizontal clearances.)
- 6) If the removal plan includes concrete demolition, include the details of rubble control such as maximum anticipated size of rubble, drop distance, shield size and shield position.

7) The Bridge Removal Plan will indicate locations and types of temporary supports, shoring, cables or bracing required. Refer to current standard drawing 106613 "General Shoring Requirements" "Guidelines for Design and Construction of Falsework for Structures" and "Guidelines for Design and Construction of Shoring Adjacent to Active Railroad Tracks", and the appropriate Federal, State and local regulations and building codes.

8) If any temporary supports interfere with the natural drainage along the Railroad right-of-way, a temporary drainage diversion plan shall be included in the Bridge Removal Plan. The drainage plan shall route all surface water away from the railroad tracks.

- a) Do not block drainage in side ditches with debris.
- b) Do not place footing blocks in drainage ditches.
- c) Surface runoff must be diverted away from the footing block excavations to avoid saturation of the underlying supporting soils.

9) The Demolition Plan shall include details, limits, and locations of protective shields or other measures designed to protect the rails, ties and ballast from falling debris. Include details of catchment apparatus necessary to protect the tracks from rolling debris that may fall onto side slopes. Include the design load for the shields for both the maximum static load and the maximum anticipated impact loads from falling debris. Specify the type of equipment that will be utilized to remove the debris and shields from operational tracks.

10) Protection of the track ballast section must be provided to avoid contamination of the rock with fine dust and mud produced during demolition activities. Filter fabric or some other effective means of prevent ballast contamination should be incorporated into the Demolition Plan.

11) All overhead and underground utilities in the area affected by removal of the bridge shall be located on the drawings, including any fiber optic, railroad signal, and communication lines.

11) Indicate the limits of demolition of substructures, including depths and dimensions of excavations that might be necessary to demolish buried footings.

12) The Demolition Plan should include details of planned on-site fire suppression.

B. The Contractor shall submit to the Railroad: three (3) complete sets of the Bridge Removal Plan for review and comments.

1. The Plan shall be sealed by a Civil or Structural Engineer registered in the state where the proposed demolition will take place.

2. A minimum of four (4) weeks shall be expected for the Railroad's review after the complete submittal is received.

3. No removal operations will be permitted over the Railroad right of way until the submitted material has been reviewed and approved.

C. Approval and/or comments furnished by the Railroad in the course of review of the Contractor's Removal Plan will not relieve the Contractor of the ultimate responsibility for the safe and secure demolition of the structure.

III. PROCEDURE

A. The Bridge Removal Plan must be executed such that stability is continuously maintained for the standing portions of the structure over all tracks.

1) All members of the structure being demolished must be continuously supported to resist high winds, including wind buffets and suction forces generated by high speed trains.

B. Prior to proceeding with bridge removal, the sealing Civil or Structural Engineer, or his authorized representative, shall inspect all components of the temporary support shoring, including temporary bracing and protective coverings, insuring conformity with the working drawings.

1) The sealing Engineer shall certify in writing to the Railroad that the work is in conformance with the drawings and that the materials and workmanship are satisfactory.

2) A copy of this certification shall be available at the job site at all times.

C. Well in advance of planned work, coordinate the removal schedule with the Railroad.

1) No work is allowed within 25 feet of the nearest active track unless protected by a Railroad Flagman.

2) All the removal work within 25 feet of the nearest active track shall be performed during the Track Windows granted by the Railroad Flagman.

3) When trains pass the work site, all demolition activity within 50 feet of the track shall stop until the entire length of the train has passed the work site.

D. All substructures shall be removed to at least 3 feet below the final finished grade or at least 3 feet below base of rail whichever is lower, unless otherwise specified by the Railroad.

E. All debris and refuse shall be removed from the railroad right of way by the Contractor. The premises shall be left in a neat and presentable condition to the exclusive satisfaction of the Railroad. Soils contaminated by fuel spills, hydraulic oil leaks, etc. will be removed from railroad right of way and replaced to the exclusive satisfaction of the Railroad.

F. The work progress shall be reviewed and logged by the Contractor's Engineer. Should an unplanned event occur, the Contractor shall inform the Railroad and submit a procedure to correct or remedy the occurrence.

G. Beam removal and all other demolition procedures shall take place as much as practicable with equipment positioned above the track. In the rare case that beams require removal from below the structure, the following steps shall be taken before beams are allowed to straddle the tracks:

1) Certain territories with high density train traffic, especially where multiple main tracks are affected, may not grant Track Windows on all tracks simultaneously. Beam removal from the underside of structures may not be possible unless the procedure can be accomplished in very short Track Windows or be engineered such that only one track is affected.

2) The work shall be scheduled well in advance with the Railroad's Service Unit Superintendent subject to the Railroad's operational requirements for continuous train operations. The beam removal plan must be engineered to minimize the Track Window time.

3) The rails, ties and ballast shall be protected. No equipment will be crossed over or placed on the tracks unless pre-approved by the Railroad.

4) The beams shall be blocked to prevent the beams from coming into contact with the rails. Blocking shall not be placed on the rails or ties.

5) Upon approach of a train, the beams and all personnel and equipment will be moved a position to provide a minimum of 15 feet horizontal clearance and 21 ft. vertical clearance from the nearest rail. Care must be exercised to insure that crane booms are rotated to a position parallel with the track.

IV. TRACK PROTECTION

A. The track protective cover shall be constructed before beginning bridge removal work and may be supported by falsework or members of the existing structure. See the attached "Track Shield Detail and Frame Protection Detail" for additional requirements. The following are examples of protective covers that may be acceptable:

1) A decking supported by the bridge or a suspended cover from the bridge above the track clearance envelope.

2) A track shield cover over the tracks per the attached detail.

3) A framed cover outside the track clearance envelope.

4) A catcher box or loader bucket under decking and parapets overhanging the exterior girders.

5) Protection of the track ballast section must be provided to avoid contamination of the rock with fine dust and mud produced during demolition activities. Filter fabric or some other effective means of prevent ballast contamination should be incorporated into the Demolition Plan.

B. Construction equipment shall not be crossed over or placed on the tracks unless the rails, ties and ballast are protected against damage.

1) Track protection is required for all equipment including rubber tired equipment.

2) A list of equipment to be crossed over or positioned on the tracks along with the intended method of protection shall be submitted to the railroad for approval prior to use at the job site.

C. Temporary haul road crossings shall be either Timbers or Precast Concrete Panels. The type of crossing shall be determined by the Railroad.

1) Solid timbers or ballast with timber headers shall be used between multiple tracks.

2) If the job site is accessible to the public, all temporary haul road crossings shall be protected with barricades or locked gates when the Contractor is not actively working at the site.

3) Installation and removal of temporary track crossings for equipment shall be scheduled well in advance with the Railroad.

V. CRANES

A. When cranes are operated over or adjacent to the tracks the following is required:

- 1) The Contractor shall verify that the foundations and soil conditions under the crane and crane outriggers can support the loads induced by the crane under an assumed maximum capacity lift. The size and material type of crane mats shall be rigid and of sufficient capacity to safely distribute the crane loads.
- 2) Front end loaders and backhoes cannot be used in place of a crane to lift materials over the tracks. These types of equipment do not have the necessary safety features built into the machines to circumvent overloading and tipping. Only cranes with the rated capacity to handle the loads may be used.
- 3) Additional track protection may be required for a crane when crossing over the track. The protection methods shall be submitted to the Railroad for review and comment well in advance of intended use.
- 6) Cranes and other equipment utilizing outriggers shall not place outriggers on the tracks or ballast.
- 7) Cranes or crane booms shall not be positioned within the track clearance envelope without Railroad Flagman protection. Cranes operating from a position farther than 25 ft. from the nearest track will need a Railroad Flagman present if the boom length is such that it could fall onto a track.
- 8) During passage of a train, the Crane Operator must stop all movements. Crane Operators shall remain in the cab with motor at idle with the load lines, boom, rotation and travel controls locked and stationary until the full length of the train has passed the job site.

VI. CUTTING TORCHES

A. When a cutting torch or welding equipment is used in the demolition process, the following steps shall be taken:

- 1) Fire suppression equipment is required on-site.
- 2) Do not use a torch over, between, or adjacent to the tracks unless a steel plate protective cover is used to shield against sparks and slag coming into contact with timber ties. Care shall be taken to make certain the use of a steel plate does not come in contact with the rails. See "Track Shield Details" for other requirements. Details of the shield shall be submitted to the Railroad for approval.
- 3) Wet the ties below the steel plate and wet other timbers and flammable demolition debris located near cutting areas.
- 4) Monitor the work site for at least three hours after cutting has ceased to detect a smoldering fire.

B. Extensive overhead cutting may require more robust fire suppression equipment and precautions than what would normally be required for routine cuts.

- 1) On days when extensive torch cutting is planned, the Contractor shall have a larger water supply on hand or take other measures as needed to effectively suppress fires.
- 2) Overhead torch cutting and welding must cease upon approach and passage of a train.
- 3) Extensive torch cutting shall not take place during high winds.
- 4) Contractor will clear vegetation and other combustible debris from the surrounding work areas prior to engaging in extensive torch cutting.

VII. UTILITIES

A. The demolition operations shall be planned such that the utility lines are operating safely at all times. The utility lines shall be protected if affected by demolition operations. All the work associated with utility lines should be coordinated by the contractor with the respective utility companies.

VIII. HAZARDOUS MATERIALS

A. If any hazardous materials are discovered, provide material protection as specified in local hazardous material codes and immediately contact the Railroad.

- 1) If pipelines are attached to the structure, pipes must be purged of flammable or hazardous materials prior to beginning demolition.
- 2) Fuel spills, hydraulic fluid releases, equipment oil leaks or any other release of contaminants must be reported to the Railroad. Contaminated soils must be removed and replaced to the satisfaction of the Railroad.



Route _____
Section 08-00278-00-BR
County Kane

Marked Rte. Ohio Street
Project No. BRM-9003(165)
Contract No. 63859

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.

Richard Munson, PE
Print Name
Project Coordinator
Title
City of Aurora
Agency

[Handwritten Signature]
Signature
8/21/14
Date

I. Site Description:

A. Provide a description of the project location (include latitude and longitude):

The project is located in Kane County along Ohio Street in the City of Aurora between Indian Avenue and Rural Street. (Latitude: 41 Degrees 45 Minutes 05 Seconds, Longitude: 88 Degrees 17 Minutes 29 Seconds) There is an existing grade-separation structure over the Burlington Northern Santa Fe (BNSF) Railroad and Indian Creek waterway.

B. Provide a description of the construction activity which is the subject of this plan:

The improvements includes the removal and construction of a grade-separation structure of Ohio Street over the BNSF Railroad. The work to be performed consists of roadway reconstruction and widening, pavement removal, earth excavation, furnished excavation, HMA pavement, curb and gutter, bridge removal, bridge construction, MSE retaining walls, guardrail, storm sewer and drainage structure adjustments and installation, sanitary sewers, water main, landscaping, striping and all incidental and collateral work necessary to complete the project.

C. Provide the estimated duration of this project:

The estimated duration of this project is 12 months.

D. The total area of the construction site is estimated to be 4.2 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 3.4 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

The estimated runoff coefficient for this project after construction activities is C=0.71

F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:

Per the Natural Resources Conservation Service's Web Soil Survey, the following soil types are present in the vicinity of the project:

Milford silty clay loam (69A) - A poorly drained soil with moderately slow permeability. Slopes vary from 0 to 2

percent and classified as a hydric soil.

Ashkum silty clay loam (232A) - A poorly drained soil with moderately slow permeability. Slopes vary from 0 to 2 percent and classified as a hydric soil.

Ozaukee silt loam (530B) - A moderately well drained soil with slow permeability. Slopes vary from 2 to 4 percent and soil status is nonhydric soil.

Ozaukee silt loam (530C2) - A moderately well drained soil with slow permeability. Slopes vary from 4 to 6 percent and soil status is nonhydric soil.

- G. Provide an aerial extent of wetland acreage at the site:

Indian Creek, a "Waters of the U.S." (WOUS), which flows west beneath Ohio Street, north of the BNSF Railroad within the project limits includes fringe wetlands that functions as flood control and wildlife habitat.

- H. Provide a description of potentially erosive areas associated with this project:

Potentially erosive areas include locations of embankment grading and excavation; isolated locations with slopes steeper than 1V:3H; and the stream banks along Indian Creek waterway. Special measures will be taken to prevent erosion in these areas, including surface roughing treatment of bare earth surfaces, installation of erosion control blanket with temporary seeding, and final stabilization with sod.

- 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):

The plan documents, hereby incorporated by reference, contain site map(s) indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of major soil disturbance, the location of major structural and nonstructural 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 a surface water.

- 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:

City of Aurora

- L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.

kane County

- M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:

All stormwater from the proposed improvement will discharge into Indian Creek. Fox River is the ultimate receiving water.

- N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

All areas of the site will be protected with erosion control measures.

- O. The following sensitive environmental resources are associated with this project, and may have the potential to be impacted by the proposed development:

- Floodplain
- Wetland Riparian
- Threatened and Endangered Species

- Historic Preservation
- 303(d) Listed receiving waters for suspended solids, turbidity, or siltation
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation
- Applicable Federal, Tribal, State or Local Programs
- Other

1. 303(d) Listed receiving waters (fill out this section if checked above):

- a. The name(s) of the listed water body, and identification of all pollutants causing impairment:
- b. Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:
- c. Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:
- d. Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

2. TMDL (fill out this section if checked above)

- a. The name(s) of the listed water body:
- 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:

P. The following pollutants of concern will be associated with this construction project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input checked="" type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Solid Waste Debris | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input checked="" 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:** At a minimum, controls must be coordinated, installed and maintained to:
1. Minimize the amount of soil exposed during construction activity;
 2. Minimize the disturbance of steep slopes;
 3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
 4. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. **Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(B)(1) and II(B)(2), stabilization measures shall be initiated immediately where construction activities have temporarily or permanently ceased, but in no case more than one (1) day after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- | | |
|---|--|
| <input type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input checked="" type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input checked="" 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 type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) |

Describe how the stabilization practices listed above will be utilized during construction:

Protection of any trees to remain shall consist of items "temporary fencing" and "tree trunk protection" as shown on the plans or as directed by the Resident Engineer in accordance with Article 201.05 of the "Standard Specifications for Road and Bridge Construction (Current Edition)."

Temporary Erosion Control Seeding shall be applied in accordance with the "Standard Specifications for Road and Bridge Construction (Current Edition)." Seed mixture will depend on the time of year it is applied. Oats will be applied from March 1 to July 31 and Winter Wheat from August 1 to November 15. All areas disturbed by construction will be stabilized within seven days with Temporary Erosion Control Seeding.

Erosion Control Blankets/Mulching - Erosion control blankets will be installed over fill slopes and in high velocity areas (i.e. ditches) that have been brought to final grade and seeded to protect slopes from erosion and allow seeds to germinate.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

All areas disturbed by construction will be stabilized as soon as permitted with sodding immediately following the finished grading at locations shown on the plans or as directed by the Engineer.

C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following structural practices will be used for this project:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input checked="" type="checkbox"/> Rock Outlet Protection |
| <input checked="" type="checkbox"/> Temporary Ditch Check | <input checked="" type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input checked="" type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input type="checkbox"/> Turf Reinforcement Mats | <input checked="" type="checkbox"/> Other (specify) Inlet Filters |
| <input type="checkbox"/> Permanent Check Dams | <input checked="" type="checkbox"/> Other (specify) Inlet and Pipe Protection |
| <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:

Perimeter Erosion Barrier - Prior to commencement of any grading activities, a continuous sediment control silt fence shall be placed adjacent to construction areas to intercept sheet flow of waterborne silt and sediment and prevent it from leaving the construction site. The locations requiring silt fence are designated on the Erosion Control Plans. A fully enclosed silt fence shall be placed around any soil stockpiles on site in accordance with the Standard Specifications. Locations of stockpiles are to be determined by the Contractor and approved by the Engineer.

Temporary Ditch Check - Rolled excelsior ditch checks shall be placed in disturbed or newly graded swales at the spacing such that the low point in the center of the ditch check is at the same elevation as the base of the ditch check immediately upstream, or as directed by the Engineer. The ditch checks will prevent siltation, scour, and downstream erosion of newly graded swales and drainage ways. Temporary ditch check locations are marked on the Erosion Control Plans.

Inlet Filters - These will be placed in all open grate inlets and catch basins within the roadway limits as identified on the Erosion Control Plans.

Inlet and Pipe Protection - This system shall be a combination of temporary ditch checks, erosion control blanket (heavy duty), and temporary seeding. Straw bales and silt fence shall not be utilized for this purpose, as these measures result in flooding. The Erosion Control Plans will identify the structures requiring inlet and pipe protection.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Rip-Rap - Stone rip-rap with filter fabric will be provided as both a temporary and permanent erosion control measure to dissipate energy and collect sediment at storm sewer and culvert end sections.

Retaining Walls - Mechanically stabilized earth retaining walls will be placed along all four quadrants of the proposed bridge of the roadway embankment over the BNSF Railroad and Indian Creek waterway to aid in restraining the earthen embankment.

D. Treatment Chemicals

Will polymer flocculants or treatment chemicals be utilized on this project: Yes No

If yes above, identify where and how polymer flocculants or treatment chemicals will be utilized on this project.

E. Permanent Storm Water Management Controls: Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design 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.

2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

Storm Water Management Controls will be implemented by reducing the flow rates and removing suspended matter before the storm water leaves the site. This will be accomplished through the use of vegetated ditches.

- F. **Approved State or Local Laws:** The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

All management practices, controls, and other provisions provided in this plan are in accordance with the IDOT Standard Specifications for Road and Bridge Construction and the Illinois Urban Manual.

- G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
 - Approximate duration of the project, including each stage of the project
 - Rainy season, dry season, and winter shutdown dates
 - Temporary stabilization measures to be employed by contract phases
 - Mobilization 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

2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
 - Vehicle Entrances and Exits – Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
 - Material Delivery, Storage and Use – Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
 - Stockpile Management – Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
 - Waste Disposal – Discuss methods of waste disposal that will be used for this project.
 - Spill Prevention and Control – Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
 - Concrete Residuals and Washout Wastes – Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
 - Litter Management – Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
 - Vehicle and Equipment 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.
 - Dewatering Activities – Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
 - Polymer Flocculants and Treatment Chemicals – Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
 - Additional measures indicated in the plan.

III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution runoff in compliance with environmental law and EPA Water Quality Regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site. On a weekly basis, the Engineer shall inspect the project to determine whether erosion control efforts are in place and effective and if additional control measures are necessary. Sediment collected during construction by the various temporary erosion control systems shall be disposed on the site on a regular basis as directed by the Engineer and stabilized accordingly.

All erosion and sediment control measures should be checked weekly and after each significant rainfall (0.5 inch or greater in a 24-hour period) or equivalent snowfall. Additionally, during winter months (if applicable), all measures should be checked after each significant snowmelt. The following items should be checked:

1. Seeding – all areas subject to erosion, including erodible bare earth areas, will be temporarily seeded and inspected on a weekly basis to minimize the amount of erodible surface within the contract limits;
2. Sediment Control, Silt Fence - sediment will be removed if the integrity of the fence is in jeopardy and any fencing knocked down will be repaired immediately;
3. Erosion Control Blanket - any areas which fail will be repaired immediately;
4. Ditch Checks - sediment will be removed if the integrity of the ditch check is in jeopardy. Any ditch check which fails will be repaired or replaced immediately;

5. Tree Protection;
6. Sedimentation and/or Dewatering Basins (if any);
7. Stabilized Construction Exits (if any); and
8. Areas used for materials and storage that are exposed to storm water.

Additionally, all locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically. Inspection of these areas shall be made at least once every seven (7) days and within 24 hours of the end of each 0.5 inch or greater rainfall or equivalent snowfall.

All maintenance of the erosion and sediment control measures will be the responsibility of the Contractor. This maintenance shall be in accordance with the IDOT Erosion and Sediment Control Field Guide for Construction Inspection (dated July 1, 2010) and IDOT's Best Management Practices - Maintenance Guides.

These maintenance guides can be located at the following links:

<http://www.dot.state.il.us/desenv/environmental/IDOT%20Field%20Guide.pdf>

<http://www.dot.state.il.us/desenv/environmental/bestpractices.html>

The temporary erosion control systems shall remain in place with proper maintenance until the permanent erosion controls are in place, working properly, and seeding has been established. Once the permanent erosion control systems have taken hold and are functional, the temporary items shall be removed along with any trapped sediment and any disturbed areas shall be reseeded.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by 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

Additional Inspections Required:

V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	_____	Marked Rte.	Ohio Street
Section	08-00278-00-BR	Project No.	BRM-9003(165)
County	Kane	Contract No.	63859

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. 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 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.G. of SWPPP:



Date of Inspection: _____ County: Kane

Name of Inspector: _____ Section: 08-00278-00-BR

Type of Inspection: Weekly Route: Ohio Street

>0.5" Precip. Precip. Amt: _____ " District: 1

Contractor: _____ Contract No: 63859

Subs: _____ Job No. P-91-199-09

Project: BRM-9003(165)

NPDES/ESC Deficiency Deduction: \$ _____ NPDES Permit No: _____

Total Disturbed Area: _____ acre Ready for Final Cover: _____ acre

Final Cover Established: _____ acre

Erosion and Sediment Control Practices

Item # / BMP		YES	NO	N/A
1.	Slopes: Do all slopes and exposed areas where soil disturbing activities have temporarily or permanently ceased, and not permanently stabilized, have adequate temporary seed or other stabilization in accordance with the NPDES permitted 7 and 14 day rule?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Ditches Are all ditches (existing and temporary) clear of sediment and/or debris? Do all ditches have adequate stabilization and structural practices in place?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
3.	Perimeter Erosion Barrier: Are all perimeter erosion barriers in good working order? Has perimeter barrier no longer needed been removed and the area stabilized?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
4.	Temporary Ditch Checks: Are all temporary ditch checks in good working order? Are the current ditch checks adequate to control erosion?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
5.	Temp Diversions/ Slope Drains: Are all Temporary Diversions and Slope Drains functioning properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Inlet Protection: Are ALL inlet protection devices in good working order? Are ALL inlet filters less than 25% full and fabric unobstructed?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
7.	Sediment Basins/Traps: Are ALL sediment basins/traps in good working order? Does sufficient capacity exist for the design stormwater event?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
8.	Areas of Interest – Wetland/Prairie/Tree Preservation: Has the contractor remained clear of all designated “no entry” areas? Are all “no intrusion” areas adequately marked to prevent accidental entry?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
9.	Stock Piles: Are all stockpiles properly situated and maintained to prevent runoff and protected to minimize discharge of materials or residue in case of erosion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Borrow/Waste Sites: Are all borrow and waste locations, including those located offsite, in compliance with NPDES requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Other Installations: Are all other BMP installations shown in the plans properly functioning? (note in comments)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

General Site Maintenance Required of the Permit

12.	Vehicle Tracking: Is the site free from mud, sediment and debris from the vehicles entering/leaving off road areas throughout the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Are Stabilized Construction field entrances properly located?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Are Stabilized Construction field entrances in good working condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INTENT (NOI)
GENERAL PERMIT TO DISCHARGE STORM WATER
CONSTRUCTION SITE ACTIVITIES

OWNER INFORMATION

COMPANY/ OWNER NAME: City of Aurora		OWNER TYPE: SELECT ONE City MS4 Community <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
MAILING ADDRESS: 44 E. Downer Place		PHONE: Area Code (630) Number 256-3256 ext.			
CITY: Aurora	STATE: IL	ZIP CODE: 60507	FAX: Area Code (630) Number 256-3229		
CONTACT PERSON: Richard Munson		EMAIL: RMunson@aurora-il.org			

CONTRACTOR INFORMATION

CONTRACTOR NAME:					
MAILING ADDRESS:		PHONE: Area Code () Number ext.			
CITY:		STATE:	ZIP CODE:		

CONSTRUCTION SITE INFORMATION

SELECT ONE:	<input checked="" type="checkbox"/> NEW SITE <input type="checkbox"/> CHANGE OF INFORMATION FOR: ILR10									
PROJECT NAME:	Ohio Street - Indian Avenue to Rural Street							COUNTY: Kane		
STREET ADDRESS/ LOCATION:	Ohio Street - Indian Avenue to Rural Street					CITY: Aurora		IL	ZIP CODE: 60507	
LATITUDE:	DEG. 41	MIN. 46	SEC. 05	LONGITUDE:	DEG. 88	MIN. 17	SEC. 29	SECTION: 14	TOWNSHIP: T38N	RANGE: R8E
APPROX CONST START DATE 1 / 1 / 2014	APPROX CONST END DATE 12 / 30 / 2014		TOTAL SIZE OF CONSTRUCTION SITE IN ACRES: <u>4.2</u> If less than 1 acre, is site part of larger common plan of development? <input type="checkbox"/> YES <input type="checkbox"/> NO							

STORM WATER POLLUTION PREVENTION PLAN INFORMATION

HAS STORM WATER POLLUTION PREVENTION PLAN BEEN SUBMITTED TO AGENCY? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (SUBMIT SWPPP ELECTRONICALLY TO: epa.constilr10swppp@illinois.gov)	
WILL STORM WATER POLLUTION PREVENTION PLAN BE AVAILABLE AT SITE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
LOCATION OF SWPPP FOR VIEWING: ADDRESS: City of Aurora, 44 E. Downer Place	CITY: Aurora
SWPPP CONTACT INFORMATION: NAME: Mr. Richard Munson	INSPECTOR QUALIFICATIONS: SELECT ONE P.E.
PHONE: (630) 256-3256	FAX: (630) 256-3229
EMAIL: RMunson@aurora-il.org	
PROJECT INSPECTOR, IF DIFFERENT THAN ABOVE: NAME:	INSPECTOR QUALIFICATIONS: SELECT ONE Other
PHONE: ()	FAX: ()
EMAIL:	

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INTENT (NOI)
GENERAL PERMIT TO DISCHARGE STORM WATER
CONSTRUCTION SITE ACTIVITIES**

TYPE OF CONSTRUCTION (SELECT ALL THAT APPLY)

SELECT ONE Transportation
TYPE DETAILED DESCRIPTION OF PROJECT: Roadway & bridge reconstruction and widening, MSE retaining walls, storm sewer, sanitary sewer, water main

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

HAS THIS PROJECT BEEN SUBMITTED TO THE FOLLOWING STATE AGENCIES TO SATISFY APPLICABLE REQUIREMENTS FOR COMPLIANCE WITH ILLINOIS LAW ON:			
HISTORIC PRESERVATION	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	http://www.illinoishistory.gov/PS/rcdocument.htm
ENDANGERED SPECIES	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	http://dnrecocat.state.il.us/ecopublic/

RECEIVING WATER INFORMATION

DOES YOUR STORM WATER DISCHARGE DIRECTLY TO: <input type="checkbox"/> WATERS OF THE STATE OR <input checked="" type="checkbox"/> STORM SEWER
OWNER TO STORM SEWER SYSTEMS: City of Aurora
NAME OF CLOSEST RECEIVING WATERBODY TO WHICH YOU DISCHARGE: Indian Creek

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

OWNER SIGNATURE: _____

DATE: _____

SUBMIT ELECTRONICALLY TO:
epa.constilr10swppp@illinois.gov

OR MAIL COMPLETED FROM TO:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
ATTN: PERMIT SECTION
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276
www.epa.state.il.us

FOR OFFICE USE ONLY

LOG:

PERMIT NO. ILR10 _____

DATE:

Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

IL 532 2104
WPC 623 Rev. 8/08

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Please adhere to the following instructions:

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the lower right hand corner.

< **Submit completed forms to:**

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217)782-0610
www.epa.state.il.us

< **Reports must be typed or printed legibly and signed.**

< Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

< **If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.**

< **NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.**

< **Use the formats given in the following examples for correct form completion.**

	<u>Example</u>	<u>Format</u>
SECTION	12	1 or 2 numerical digits
TOWNSHIP	12N	1 or 2 numerical digits followed by "N" or "S"
RANGE	12W	1 or 2 numerical digits followed by "E" or "W"

< **For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."**

< **Submit a fee of \$500 and the Storm Water Pollution Plan (SWPPP) for initial permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA.**

< **SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov When submitting electronically, use Project Name and City as indicated on NOI form.**

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INTENT (NOI)
GENERAL PERMIT TO DISCHARGE STORM WATER
CONSTRUCTION SITE ACTIVITIES

OWNER INFORMATION

COMPANY/ OWNER NAME: City of Aurora		OWNER TYPE: SELECT ONE City MS4 Community <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
MAILING ADDRESS: 44 E. Downer Place		PHONE: Area Code (630) Number 256-3256 ext.			
CITY: Aurora	STATE: IL	ZIP CODE: 60507	FAX: Area Code (630) Number 256-3229		
CONTACT PERSON: Richard Munson			EMAIL: RMunson@aurora-il.org		

CONTRACTOR INFORMATION

CONTRACTOR NAME:					
MAILING ADDRESS:		PHONE: Area Code () Number ext.			
CITY:		STATE:	ZIP CODE:		

CONSTRUCTION SITE INFORMATION

SELECT ONE:	<input checked="" type="checkbox"/> NEW SITE <input type="checkbox"/> CHANGE OF INFORMATION FOR: ILR10									
PROJECT NAME:	Ohio Street - Indian Avenue to Rural Street							COUNTY: Kane		
STREET ADDRESS/ LOCATION	Ohio Street - Indian Avenue to Rural Street					CITY: Aurora		IL	ZIP CODE: 60507	
LATITUDE:	DEG. 41	MIN. 46	SEC. 05	LONGITUDE:	DEG. 88	MIN. 17	SEC. 29	SECTION: 14	TOWNSHIP: T38N	RANGE: R8E
APPROX CONST START DATE 1 / 1 / 2014	APPROX CONST END DATE 12 / 30 / 2014		TOTAL SIZE OF CONSTRUCTION SITE IN ACRES: <u>4.2</u> If less than 1 acre, is site part of larger common plan of development? <input type="checkbox"/> YES <input type="checkbox"/> NO							

STORM WATER POLLUTION PREVENTION PLAN INFORMATION

HAS STORM WATER POLLUTION PREVENTION PLAN BEEN SUBMITTED TO AGENCY? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (SUBMIT SWPPP ELECTRONICALLY TO: epa.constilr10swppp@illinois.gov)	
WILL STORM WATER POLLUTION PREVENTION PLAN BE AVAILABLE AT SITE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
LOCATION OF SWPPP FOR VIEWING: ADDRESS: City of Aurora, 44 E. Downer Place	CITY: Aurora
SWPPP CONTACT INFORMATION: NAME: Mr. Richard Munson	INSPECTOR QUALIFICATIONS: SELECT ONE P.E.
PHONE: (630) 256-3256	FAX: (630) 256-3229
EMAIL: RMunson@aurora-il.org	
PROJECT INSPECTOR, IF DIFFERENT THAN ABOVE: NAME:	INSPECTOR QUALIFICATIONS: SELECT ONE Other
PHONE: ()	FAX: ()
EMAIL:	

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INTENT (NOI)
GENERAL PERMIT TO DISCHARGE STORM WATER
CONSTRUCTION SITE ACTIVITIES**

TYPE OF CONSTRUCTION (SELECT ALL THAT APPLY)

SELECT ONE Transportation
TYPE DETAILED DESCRIPTION OF PROJECT: Roadway & bridge reconstruction and widening, MSE retaining walls, storm sewer, sanitary sewer, water main

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

HAS THIS PROJECT BEEN SUBMITTED TO THE FOLLOWING STATE AGENCIES TO SATISFY APPLICABLE REQUIREMENTS FOR COMPLIANCE WITH ILLINOIS LAW ON:			
HISTORIC PRESERVATION	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	http://www.illinoishistory.gov/PS/rcdocument.htm
ENDANGERED SPECIES	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	http://dnrecocat.state.il.us/ecopublic/

RECEIVING WATER INFORMATION

DOES YOUR STORM WATER DISCHARGE DIRECTLY TO: <input type="checkbox"/> WATERS OF THE STATE OR <input checked="" type="checkbox"/> STORM SEWER
OWNER TO STORM SEWER SYSTEMS: City of Aurora
NAME OF CLOSEST RECEIVING WATERBODY TO WHICH YOU DISCHARGE: Indian Creek

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

OWNER SIGNATURE: _____

DATE: _____

SUBMIT ELECTRONICALLY TO:
epa.constilr10swppp@illinois.gov

OR MAIL COMPLETED FROM TO:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
ATTN: PERMIT SECTION
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276
www.epa.state.il.us

FOR OFFICE USE ONLY	
LOG:	
PERMIT NO. ILR10 _____	
DATE:	

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Permit Section
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Springfield, Illinois 62794-9276
or call (217)782-0610
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< **Reports must be typed or printed legibly and signed.**

< Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

< **If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.**

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< **For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."**

< **Submit a fee of \$500 and the Storm Water Pollution Plan (SWPPP) for initial permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA.**

< **SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov When submitting electronically, use Project Name and City as indicated on NOI form.**

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CONSTRUCTION SITE STORM WATER DISCHARGE
INCIDENCE OF NON-COMPLIANCE (ION)**

PERMITTEE NAME:	LAST	FIRST	MIDDLE INITIAL	AREA CODE + PHONE NUMBER:			
STREET:		CITY:		ST:	ZIP:		
CONSTRUCTION SITE NAME:	Ohio Street - Indian Avenue to Rural Street						
COUNTY:	Kane	SECTION:	14	TOWNSHIP:	38		
		RANGE:	8				
NPDES PERMIT NUMBER:	I	L	R	1	0		
LATITUDE:	DEG.	MIN.	SEC.	LONGITUDE:	DEG.	MIN.	SEC.
	41	46	05		88	17	29

CAUSE OF NON-COMPLIANCE:

ACTIONS TAKEN TO PREVENT ANY FURTHER NON-COMPLIANCE:

ENVIRONMENTAL IMPACT RESULTING FROM THE NON-COMPLIANCE:

ACTIONS TAKEN TO REDUCE THE ENVIRONMENTAL IMPACT RESULTING FROM THE NON-COMPLIANCE:

SIGNATURE: _____ TITLE: _____ DATE: _____

MAIL COMPLETED FORM TO:
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DIVISION OF WATER POLLUTION CONTROL
COMPLIANCE ASSURANCE SECTION #19
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SPRINGFIELD, ILLINOIS 62794-9276

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FORM**

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**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF TERMINATION (NOT)
OF COVERAGE UNDER THE GENERAL PERMIT
FOR STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION SITE ACTIVITIES**

Please use the tab or arrow keys

OWNER INFORMATION

NAME:	LAST City of Aurora	FIRST	MIDDLE	OWNER TYPE: PRIVATE City
MAILING ADDRESS:	44 E. Downer Place			
CITY:	Aurora	STATE:	IL	ZIP: 60507
CONTACT PERSON:	Richard Munson		TELEPHONE NUMBER:	AREA CODE 630 NUMBER 256-3256

CONTRACTOR INFORMATION

NAME:	LAST	FIRST	MIDDLE	TELEPHONE NUMBER:	AREA CODE	NUMBER
MAILING ADDRESS:	CITY:			STATE:	ZIP:	

CONSTRUCTION SITE INFORMATION

FACILITY NAME:	Ohio Street	OTHER NPDES PERMIT NOS.:	I	L	R	1	0						
FACILITY LOCATION:	Ohio Street - Indian Avenue to Rural Street												
CITY:	Aurora	STATE:	IL	ZIP:	60507	LATITUDE:	41	46	05	LONGITUDE:	88	17	29
COUNTY:	Kane	SECTION:	14	TOWNSHIP:	T38N	RANGE:	R8E						

DATE PROJECT HAS BEEN COMPLETED AND STABILIZED:

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized or that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to Waters of the State is unlawful under the Environmental Protection Act and the Clean Water Act where the discharge is not authorized by an NPDES permit.

OWNER SIGNATURE: _____

DATE: _____

MAIL COMPLETED FORM TO:

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DIVISION OF WATER POLLUTION CONTROL
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TOWNSHIP	12N	1 or 2 numerical digits followed by "N" or "S"
RANGE	12W	1 or 2 numerical digits followed by "E" or "W"

•••• Final stabilization has occurred when:

- (a) all soil disturbing activities at the site have been completed
- (b) a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures,
- (c) or equivalent permanent stabilization measures have been employed.

**STRUCTURE GEOTECHNICAL REPORT
OHIO STREET BRIDGE OVER THE
BNSF RAILROAD AND INDIAN CREEK
SN 045-9942, SECTION 08-00278-00-BR
IDOT JOB P-91-199-09, PROJECT BRM-9003(163)
KANE COUNTY, ILLINOIS**

**for
TranSystems Corporation
1475 Woodfield Road, Suite 600
Schaumburg, IL 60173
(847) 605-9600**

**submitted by
Wang Engineering, Inc.
1145 North Main Street
Lombard, IL 60148
(630) 953-9928**

April 8, 2013

Technical Report Documentation Page

1. Title and Subtitle Structure Geotechnical Report, Ohio Street over the BNSF Railroad and Indian Creek in Kane County		2. Report Date April 8, 2012
		3. Report Type <input checked="" type="checkbox"/> SGR <input type="checkbox"/> RGR <input type="checkbox"/> Draft <input type="checkbox"/> Final <input checked="" type="checkbox"/> Revised
4. Route / Section / County Ohio Street/ 08-00278-00-BR/ Kane		5. IDOT Job / Project No. P-91-199-09 / BRM-9003(163)
6. PTB / Item No.	5. Existing Structure Number(s) SN 045-9943	6. Proposed Structure Number(s) SN 045-9942
7. Prepared by Wang Engineering, Inc. 1145 N Main Street Lombard, IL 60148	Contributor(s) Author: Mickey Snider, P.E. QC/QA: Jerry W.H. Wang, PhD, P.E. PM: Liviu Iordache, P.G.	Contact Phone Number (630) 953-9928 ext 27
9. Prepared for TranSystems Corporation 1475 Woodfield Road Schaumburg, IL 60173	Design / Structural Engineer Matthew Santeford, P.E., S.E.	Contact Phone Number (847) 605-9600
10. Abstract		
<p>A new three-span structure with semi-integral abutments will replace the existing Ohio Street Bridge over the BNSF Railroad and Indian Creek. This report provides geotechnical recommendations for the design of proposed bridge foundations and the MSE wall-supported approach embankment widening.</p> <p>The existing embankments consist of about 25 feet of primarily silty clay loam and silty loam fill. Beneath the embankments and near the surface at the pier locations, the foundation soils include 5 to 12 feet of clay, silty clay loam and silty loam resting on top of competent outwash sand and gravelly sand. Bedrock cores revealed strong, very poor to fair quality dolostone. The site classifies in the Seismic Class D and the site lies in Seismic Performance Zone 1.</p> <p>The embankment widening will be supported by a series of MSE walls to both the north and south of the bridge. The MSE wall foundation soils have a maximum factored bearing resistance of 4,000 psf along both embankments. The estimated settlement along the north embankment is 1.1 inches; at the south embankment the settlement is estimated at about 1.8 inches in the vicinity of Station 108+25 and 1.0 inch along the remainder of the embankment. To protect an existing water main running beneath the south embankment at Station 108+25, we recommend either 1) constructing the south embankment and MSE walls with expanded lightweight shale aggregate (ELSA) between Stations 108+00 and 108+75, or 2) constructing a support slab above the main founded on 12-inch diameter metal shell piles. Global stability analyses show satisfactory FOS of 2.1 to 1.5 for the slopes along the MSE walls and end slopes at the abutments.</p> <p>The proposed abutments and piers could be supported on steel H-piles. We estimate about 20- to 70-foot long piles for factored resistances of 50 to 388 kips. The piers could also be supported on spread footings with an estimated factored bearing resistance available of 3,600 psf. We do not recommend the use of drilled shafts due to the presence of granular soils and relatively shallow groundwater. The bridge will be constructed under full closure and stage construction considerations are not required. Excavations for the removal and replacement of the piers adjacent to the BNSF tracks and Indian Creek can be designed based on IDOT <i>Design Guide 3.13.1</i> with an embedment depth of 15 to 17 feet.</p>		
11. Path to archived file		
S:\Netprojects\7906301\Reports\RPT_Wang_MLS_7906301OhioStreetFinal_130408.pdf		

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**STRUCTURE GEOTECHNICAL REPORT
OHIO STREET BRIDGE OVER THE BNSF
RAILROAD AND INDIAN CREEK
SN 045-9942, SECTION 08-00278-00-BR
IDOT JOB P-91-199-09, PROJECT BRM-9003(163)
KANE COUNTY, ILLINOIS
FOR
TRANSYSTEMS CORPORATION**

1.0 INTRODUCTION

This report presents the results of our subsurface investigation, laboratory testing, and geotechnical evaluations for the proposed replacement of the Ohio Street Bridge over the Burlington Northern and Santa Fe (BNSF) Railroad and Indian Creek in Kane County, Illinois. A *Site Location Map* is presented as Exhibit 1.

1.1 Proposed Structure

Wang Engineering, Inc. (Wang) understands TranSystems Corporation (TranSystems) and the City of Aurora envision a new three-span structure with semi-integral abutments, multi-column piers with crashwalls, and mechanically-stabilized earth (MSE) wall-supported approach embankments. The back-to-back abutment length will measure 345.9 feet, with span lengths of 82.0, 142.0, and 117.0 feet. The proposed out-to-out bridge width will amount to 51.1 feet to accommodate two 14-foot wide lanes, a 6-foot wide sidewalk on the east side, and a 10-foot bicycle path on the west side. Relative to the existing foundations, the proposed south abutment will be moved back approximately 40 feet and the abutment moved back approximately 10 feet. The substructure relocations will require cuts into the existing embankments and removal of the existing abutments. Pier 1 will be located immediately north of the existing south pier and Pier 2 will be constructed in the same location as the existing north Pier #3. The TSL drawing provided by TranSystems does not include provisions for stage construction and we understand Ohio Street will be detoured during construction.

The existing Ohio Street pavement elevation measures 699 feet at the north abutment and 705 feet at the south abutment; the proposed top of pavement elevations will measure 703.1 and 709.0 feet, respectively. Thus, the profile centerline grade and embankment height will increase approximately 4.0 feet. The south end slope is proposed at 1:3 (V:H) and will extend down to the railroad elevation of

approximately 680 feet for a maximum embankment height of 23 feet. The north end slope will be graded at 1:2.5 down to the existing soldier pile retaining wall along Indian Creek. To support the grade changes along the embankments, MSE walls with top of leveling pad elevations between approximately 687 and 692 feet, will extend for several hundred feet north and south of the structure. The maximum wall heights are approximately 16 feet at the north and 17.0 feet at the south.

The purpose of our investigation was to characterize the site soil and groundwater conditions, perform geotechnical analyses, and provide recommendations for the design and construction of the MSE walls and bridge foundations.

1.2 Existing Structure

The original Ohio Street Bridge was constructed in 1928 as five-span structure with a total length of 306 feet. The out-to-out width varies between 35.0 and 37.9 feet. The piers are supported on shallow foundations with base elevations of 670.0 feet at Pier 1, 668.0 feet at Pier 2, and 665.0 feet at Piers 3 and 4. The existing stub abutments are founded on concrete piles. The approach embankments measure about 150 feet long each and have 1:2 (V:H) side slopes.

2.0 SITE CONDITIONS AND GEOLOGICAL SETTING

The project area is located in the southeast Kane County. On the USGS *Aurora North Quadrangle Map*, Ohio Street crosses over the BNSF Railroad in the S $\frac{1}{2}$ of Section 14 and the N $\frac{1}{2}$ of Section 23, Tier 38 North, Range 8 East of the 3rd Prime Meridian.

The following review of published geologic data, with emphasis on factors that might influence the design and construction of proposed engineering works, is meant to place the project area within a geological framework and confirm the dependability and consistency of the subsurface investigation results. For the study of the regional geologic framework, Wang considered northeastern Illinois in general and Kane County in particular. Exhibit 2 illustrates the *Site and Regional Geology*.

2.1 Physiography

The bridge site is located approximately one mile east of the Fox River. The BNSF Railroad runs through a ravine formed by Indian Creek, which is a Fox River tributary. The ground surface elevations at the site range from approximately 700 feet (NAVD88) along Ohio Street down to 670 feet at the bottom of the ravine. The area around the bridge site is generally urban land with the

areas along the south approach embankments occupied by a baseball field (SW), and single-family homes (SE). Adjacent to the north approach embankment are wooded areas.

2.2 Surficial Cover

Quaternary glacial deposits unconformably overlie Paleozoic bedrock. During the Wisconsin glaciation, several major glacial diamicton units were deposited in Kane County (Hansel and Johnson, 1996; Willman, 1971).

The youngest of these, the Yorkville Member of the Lemont Formation, is the predominant surficial deposit in the Aurora area and forms the north-south trending Minooka Moraine to the east of the Fox River and the Saint Charles moraine to the west. The Yorkville Member is composed primarily of gray, silty clay diamicton with occasional discontinuous lenses of sand and gravel. Underlying the Yorkville, a sandy loam diamicton is commonly found and identified as the Batestown Member of the Lemont Formation, formed by till and debris flow deposits.

The succession of Wisconsin-age sediments are largely absent from the Fox River valley due to their erosion during deglaciation. The river and melt-water channels are filled by outwash sands and gravels of the Henry Formation and modern floodplain sediments identified as the Cahokia Formation.

2.3 Bedrock

The uppermost bedrock unit in Kane County consists of Silurian and Ordovician-age dolostone and shaly dolostone. At the project site, the top of bedrock is mapped between 625 to 650 feet or 45 to 85 feet below the ground surface (bgs) (Curry, 2001). The structure borings drilled at the site were extended to the top of rock. Spoon and auger refusal was recorded between 631.8 to 626.5 feet elevation.

No underground mines are known at the bridge site.

Generally, our subsurface investigation results match the geologic context described above. The borings found silty clay diamicton of the Yorkville Member near the surface outside the ravine resting on top of coarse sand diamicton deposits of the Batestown Member. In the valley occupied by the BNSF, the borings encountered sand, gravel, and flood plain deposits of the Henry and Cahokia overlying sound, dolomitic bedrock.

3.0 METHODS OF INVESTIGATION

The following sections outline the subsurface and laboratory investigations performed by Wang.

3.1 Field Investigation

The subsurface investigations along Ohio Street and the BNSF were performed by Wang in August to November 2009 and March 2013. The boring identifications, ground surface elevations and termination depths are summarized below in Table 1. The boring locations and elevations were surveyed by TranSystems. The location information is shown in the *Boring Logs* (Appendix A) and the as-drilled locations are shown on the *Boring Location Plan* (Exhibit 3).

Table 1: Soil Boring IDs, As-drilled Elevations, and Termination Depths

Structure ID	Boring ID	As-Drilled Elevations (feet)	Termination Depths (feet)
Bridge SN 045-9942	B-1 through B-5	673.3 to 705.1	55.0 to 78.6
North Retaining Walls	P-3 and P-4	693.1 to 695.7	20.0
South Retaining Walls	P-1, P-2, MSE-01, MSE-02 and CIP- 01 through CIP-03	696.8 to 701.5	15.0 to 30.0

Truck- and ATV-mounted drilling rigs, equipped with hollow stem augers, were used to advance and maintain an open borehole. Soil sampling was performed according to AASHTO T 206, "Penetration Test and Split Barrel Sampling of Soils." The soil was sampled in the structure borings at 2.5-foot intervals to a depth of 30 feet bgs and at 5.0-foot intervals thereafter. In the embankment borings the soil was continuously sampled to 10.0 feet bgs and at 2.5-foot intervals to 20.0 feet bgs. Soil samples from each interval were placed in sealed jars for laboratory testing. Bedrock core samples were obtained from Borings B-2 and B-4 in 5.0-foot runs with an NWD4-sized core barrel.

Wang obtained four, 4.0-inch diameter pavement cores from the approach pavement. Upon

retrieval, the pavement cores were described, measured, and photographed. The core photographs are included as Appendix C.

Field boring logs prepared and maintained by Wang geologists, included lithological descriptions, visual-manual soil classifications, results of pocket penetrometer or Rimac unconfined compressive strength testing on cohesive soils, and Standard Penetration Test (SPT) results recorded as blows per 6 inches of penetration.

Groundwater observations were made during and at the completion of drilling operations. The borings were backfilled with soil cuttings and bentonite chips.

3.2 Laboratory Testing

All soil samples were tested in the laboratory for moisture content (AASHTO T-265). Atterberg limits (AASHTO T 89/T 90) and particle size (AASHTO T 88) analyses were also performed on selected samples. A consolidated-undrained triaxial (AASHTO T 297) test was performed on an undisturbed Shelby tube sample from Boring B-5 along the north abutment. Field visual descriptions of the soil samples were verified in the laboratory and classified according to the IDH Soil Classification System. Laboratory test results are shown in the *Boring Logs* (Appendix A) and in the *Laboratory Test Results* (Appendix B).

4.0 RESULTS OF FIELD AND LABORATORY INVESTIGATIONS

Detailed descriptions of the soil conditions encountered during the subsurface investigation are presented in the attached *Boring Logs* (Appendix A) and in the *Soil Profile* (Exhibit 4). Please note that strata contact lines represent approximate boundaries between soil types. The actual transition between soil types in the field may be gradual in horizontal and vertical directions.

4.1 Pavement Conditions

Pavement cores from Borings P-1 through P-4 advanced along Ohio Street showed asphalt thicknesses of 3.0 to 6.0 inches and an average thickness of 4.5 inches (Appendix C-3). Borings B-1 and B-5, drilled immediately behind the abutments, found asphalt thicknesses of 9 and 11 inches, respectively.

4.2 Soil Conditions

In descending order, the general lithologic profile includes: 1) man-made ground (fill); 2) Medium stiff to hard silty clay loam and silty loam; 3) loose to very dense sand and gravelly; and 4) very poor to fair quality dolostone.

1) Man-made ground (fill)

Beneath the surface, the borings encountered various fill materials. The fill thickness along the embankments ranges from 25.0 feet behind the abutments to 7.5 feet about 300 feet away. At the track level, the fill measures between 6.5 and 10.5 feet. The fill materials consist primarily of brown, gray, and black silty clay loam and gravelly silty loam, with thinner layers of clay loam and sandy loam. A layer of buried topsoil was also encountered within the embankments.

The soil parameter data from the cohesive fill materials shows a high degree of scatter. The unconfined compressive strength (Q_u) values vary from 0.2 to 4.2 tsf and average 1.3 tsf with a standard deviation of 1.0 tsf. The moisture contents range between 10 and 42% and average 19%. The sandy loam fill has N-values between 4 and 16 blows/foot with an average of 9 blows/foot. Laboratory index testing on the fill within the south embankment shows a liquid limit (L_L) value of 33% and plastic limit (P_L) value of 16%.

Index testing within the silty loam along the north embankment soils shows L_L values of 26 to 33% and P_L values of 15 to 17%. Laboratory CU triaxial testing on a sample of silty loam from about 15 feet bgs behind the proposed north abutment measured an effective friction angle of at least 35° with negligible effective cohesion. The CU testing shows the lower Q_u values within the fill are the result of higher sand and silt content and the soil likely behave more like granular soils than cohesive when loaded.

2) Medium stiff to hard silty clay loam and silty loam

Underneath the fill, at elevations ranging from about 686 to 690 feet along the south embankment, 673 to 680 feet along the north embankment, and 666.8 feet at the track level, the borings encountered up to 15.0 feet of medium stiff to hard, brown and gray silty clay loam and silty loam. The silty clay loam has Q_u values of 0.6 to greater than 6.0 tsf with an average of about 3.1 tsf and moisture content values of 11 to 31% with an average of 15%. The silty loam has an average N-value of 13 blows/foot and moisture content values of 13 to 26%.

The silty clay loam is generally a strong, competent material, with exception of layer encountered at an

elevation of 693.3 feet (about 7.0 feet bgs) in Boring P-1. Approximately 8.0 feet of medium stiff, brown and black silty clay was encountered with an average Q_u value of 0.7 tsf and an average moisture content of 31%. Laboratory index testing shows a L_L of 49% and P_L of 20%. Borings MSE-01 and MSE-02, drilled to investigate the lateral extent of this material, did not encounter it as deep as 30 feet bgs. We conclude this soil is likely localized and will not require a large-scale attention for the construction of the south embankment and retaining walls.

3) Loose to very dense sand and gravelly sand

At elevations of 670.5 to 665.1 feet, the clay and silty clay lies on top of a 38.0 to 39.0-foot thick layer of loose to very dense sand and gravelly sand with an interbedded layer of medium dense silt and very stiff clay. The sandy and gravelly soil has N-values of 4 to 95 blows/foot with an average of 19 blows/foot. The soil in the upper 10.0-foot thick portion of the layer, above the interbedded silty soil, has lower N-values averaging 10 blows/foot; the lower portion averages 35 blows/foot. This layer terminates with spoon refusals on weathered dolostone bedrock in Borings B-1, B-2, B-4, and B-5. The interbedded silt and clay reaches thicknesses of 7.5 to 12.0 feet and has N-values averaging 17 blows/foot and Q_u values of about 2.5 tsf.

4) Very poor to fair quality dolostone bedrock

Weathered dolostone bedrock was encountered between elevations of 631.8 and 626.5 feet, with sound bedrock confirmed in Borings B-2 and B-4 at elevations of 628.3 and 625.9 feet, respectively. The bedrock was cored 10.0 feet in each boring. The cores recovered strong, very poor to fair quality, light gray dolostone with shale interbeds. The rock quality designation (RQD) values measure 6 to 58%. Bedrock core exhibits are shown in Appendix C.

4.3 Groundwater Conditions

Groundwater was encountered during drilling in the structure borings at elevations of 662.6 to 661.1 feet (11.0 to 44.0 feet bgs) within the sand and gravel (**Layer 4**). In the embankment borings, groundwater was encountered during drilling at 681.2 to 677.1 feet. The groundwater elevation was taken at an elevation of 662.0 feet in our analyses.

4.4 Scour Considerations

The hydraulic study, performed by TranSystems, indicates a design high water elevation (DHWE) of 674.4 feet and estimated water surface elevation (EWSE) of 674.3 feet at Indian Creek. The creek is a controlled-flow waterway with a streambed elevation of 665.0 feet.

The borings drilled at the track elevation show materials consisting of loose sandy and loamy fill soils (**Layer 1**, Section 4.1) with an average D_{50} value of 0.2-mm. Therefore, we recommend no reductions to the predicted scour depths. The design scour elevations to be shown on the plans are summarized in Table 2.

Table 2: Design Scour Elevations for Ohio Street Bridge

	S. Abut.	Pier 1	Pier 2	N. Abut.
Design Scour Elevation (feet)	694.00	673.48	665.46	690.00

4.5 Seismic Design Considerations

Wang estimates the minimum factor of safety (FOS) against liquefaction for the saturated sand (**Layer 3**) is greater than the AASHTO required FOS of 1.1. The soils within the top 100 feet have a weighted average SPT blow count of 35 blows per foot, classifying the site in Seismic Site Class D (AASHTO 2012; Method C); the project location belongs to Seismic Performance Zone 1. The seismic spectral acceleration parameters recommended for design in accordance with the 2008 *Interim Revisions* of the AASHTO *LRFD Design Specifications* are summarized in Table 3 (AASHTO 2012).

Table 3: Seismic Design Parameters for Ohio Street Bridge

Spectral Acceleration Period (sec)	Spectral Acceleration Coefficient ¹⁾ (% g)	Site Factors for Class Conversion	Design Spectrum for Site Class D ²⁾ (% g)
0.0	PGA= 4.9	$F_{pga}= 1.6$	$A_s= 7.8$
0.2	$S_s= 10.3$	$F_a= 1.6$	$S_{DS}= 16.4$
1.0	$S_1= 3.8$	$F_v= 2.4$	$S_{D1}= 9.1$

1) Base spectral acceleration coefficients from AASHTO (2008)

2) Site Class D values to be presented on plans ($A_s = PGA * F_{pga}$; $S_{DS} = S_1 * F_a$; $S_{D1} = S_2 * F_v$)

5.0 FOUNDATION ANALYSIS AND RECOMMENDATIONS

Geotechnical evaluations and recommendations for the approach embankments, MSE walls, approach slabs, and structure foundations are included in the following sections. We estimate the MSE walls proposed along the embankments will have adequate bearing and long-term settlement performance. The analysis and recommendations for the walls are included in Section 5.1. Wang concurs that the proposed pile-supported abutments shown in the TSL are the most appropriate foundation types. The piers should be supported by either shallow foundations or piles. Recommendations for structure foundations are included in Section 5.2.

The semi-integral abutments should consist of steel H-piles (IDOT 2012a). Due to the soil conditions, shallow foundations are not appropriate to support the abutments. The piers could be supported on shallow foundations or steel H-piles. Drilled shafts were also investigated for the support of both the piers and abutments; however, the combination of granular soils (**Layer 3**) and relatively high groundwater would result in difficult construction conditions due to soil caving and heaving.

5.1 MSE Wall Approach Embankments

Wang has performed bearing capacity, settlement, and global stability analyses for the MSE walls along the approach embankments, which will provide support for the approach slabs and pavement. The analyses are based on the GPE provided by TranSystems.

The walls should have a minimum width equal to 0.7 times the total wall height but not less than 8.0 feet (AASHTO 2002). The GPE shows the north abutment MSE wall leveling pad at elevations of about 687 to 688 feet and the total maximum wall height about 17 feet. The south abutment leveling pad is shown at elevations of about 693 to 695 feet and the total maximum wall height is also about 17.0 feet.

The low Q_u soils, primarily silt, present within the north embankment have relatively high silt and sand contents, low moisture contents, and low plasticities. Based on the index and triaxial testing we estimate these deposits will behave as granular soils when the wall loads are applied. We understand consideration has been given for constructing the southwest portion of the retaining wall system as a cast-in-place concrete retaining wall. Due to higher moisture soils encountered in Borings CIP-01 through CIP-03 at the proposed footing base elevations, we estimate the additional settlement flexibility offered by MSE walls make them the recommended type.

The medium stiff silty clay encountered in Boring P-1 along the south embankment, however, has a higher percentage of clay and higher plasticity (L_L of 49% and PI of 29%). This deposit will require additional attention due to critical utilities that cross through these potentially deformable soils.

5.1.1 Bearing Capacity

We recommend installing the MSE wall a minimum of 3.5 feet bgs. The north wall We estimate the MSE walls along both sides of the bridge will have a maximum factored bearing resistance of 4,000 psf, calculated with a bearing capacity factor (ϕ_b) of 0.65 (AASHTO 2012).

The estimated friction angle between the base of the MSE walls and the silty clay loam to silty loam fill (**Layer 1**) is 22°. The corresponding friction coefficient is 0.40. The walls should be designed for a sliding resistance factor (ϕ_r) of 1.0 (AASHTO 2012). Our analysis shows the walls constructed with a width equal to 0.7 times the height will be stable in sliding and overturning.

5.1.2 Settlement

Evaluations were performed to estimate settlements resulting from the construction of the MSE walls. The walls will apply maximum additional pressures equivalent to about 13.5 feet of soil. The silty loam within the north embankment immediately beneath the wall base elevation has liquidity indices (L_I) from 0.1 to 0.6; this indicates the soil with lower moisture content (0.1 L_I) is likely overconsolidated and the sample with higher moisture content (0.6 L_I and higher L_L) is closer to the normally consolidated state. For the applied MSE wall load in the widening area, we estimate a total long-term consolidation settlement of approximately 1.1 inches at the north wall. The clay fraction within the gravelly silty loam was measured at about 10% and the gravel fraction is about 18 to 23%. We estimate the gravelly silty loam will have a residual consolidation settlement of less than 0.4 inches after 30 days and downdrag losses on the piles will not be required. The settlement should be monitored with a settlement plate installed about 25 feet offset from the centerline at Station 112+75.

The foundation soils encountered in Boring P-1 along the south abutment have relatively high moisture contents and higher plasticity; under the proposed MSE wall load we estimate a maximum long-term consolidation settlement of approximately 1.8 inches around Station 108+50. Information provided by TranSystems and the City of Aurora indicates there is a critical 36-inch diameter water main that crosses the south embankment at approximately Station 108+25. The water main requires protection during and after construction and thus, should not be subjected loads resulting from excessive consolidation settlement beneath the MSE wall. We understand the invert elevation of the water main

is approximately 684 to 685 feet and this invert elevation puts the main at the base of the higher moisture material in Boring P-1. We estimate approximately 0.75 inches of the total 1.8 inches of long-term consolidation settlement will occur within the 36 inches above 685 feet. Along the remainder of the south MSE wall, we estimate the settlement in the widening area will be about 1.0 inch.

If the 0.75 inches of settlement around the main Station 108+25 is considered excessive, we recommend one of the following options:

- Constructing both the MSE walls and the embankment between Stations 108+00 and 108+75 with expanded lightweight shale aggregate (ELSA) at a maximum compacted unit weight of 55 pounds per cubic foot. We estimate that replacing the conventional MSE select backfill and furnished excavation with ELSA engineered fill will result in a total long-term consolidation settlement of 1.0 inch within the full height of the layer and less than 0.5-inch in the 36 inches around the main; or
- Construct a support slab, supported by metal shell piles, over the top of the water main to ensure no load transfer to the soils around the pipe. A support slab would have 12-inch diameter MSP driven to the depths shown in Table 4 of Section 5.2.2.

ELSA has been successfully used to construct MSE walls in many locations. The material has a poorly-graded gravel gradation that generally shows a friction angle of around 40° in quality control testing at a compacted unit weight between 42 and 60 pounds per cubic foot. The material has a particle density (specific gravity) between about 1.1 and 1.4, so it is not buoyant if temporarily flooded. ELSA has moisture absorption of about 8 to 10% of the final, compacted density; therefore, material placed at 55 pcf should have an assumed unit weight of about 60 pcf.

5.1.3 Global Stability

The global stability of the side and toe slopes was analyzed with *Slide 5.0* based on the soil profile described in Section 4.1 and the information provided in the GPE. The slopes are considered structure-supporting fills and the IDOT minimum required factor of safety (FOS) for short-term (undrained) and long-term (drained) conditions is 1.5. Slope stability evaluation exhibits are shown in Appendix D.

Slope stability was analyzed at Station 112+00 along the north embankment and at Stations 109+00 and 108+50 along the south embankment. The slope geometries were taken from cross sections provided by TranSystems, and the side slopes are at 1:2 (V:H). The north abutment walls show an undrained FOS of 1.9 (Appendix D-1) and a drained FOS of 1.6 (Appendix D-2). At the south MSE wall and embankment, we estimate an undrained FOS of 2.0 (Appendix D-3) and a drained FOS of 2.1

(Appendix D-4). The slopes meet the IDOT-required FOS.

The south abutment end slope is proposed at 1:3 from the face of the MSE wall down to the south track level. The north abutment end slope extends at 1:2.5 from the face of the MSE wall down to an existing retaining wall along Indian Creek and represents the critical toe slope condition. For the undrained condition, Wang estimates the slopes have a FOS of 1.9 (Appendix D-5); for the drained condition, Wang estimates the slopes have a FOS of 1.5 (Appendix D-6). We estimate the FOS meets the IDOT-requirement.

5.2 Structure Foundations

Wang recommends the abutments be supported on steel H-piles. The pier could be supported on driven pile foundations or shallow foundations. We do not recommend shallow foundations for the abutments. The combination of granular soil and groundwater conditions makes drilled shaft construction difficult.

5.2.1 Shallow Pier Foundations

Wang recommends shallow pier foundations be installed a minimum of 4.0 feet below the finished grade. Given the proposed pier locations, the Pier 1 foundation would be installed within the loose loamy fill (**Layer 1**), approximately 3.0 feet above the very stiff clay (**Layer 2**). The soil within the bottom 1.0 to 1.5 feet of fill shows high moisture content; therefore, we recommend the loose soil be removed to an elevation of 670.5 feet and replaced with compacted structural fill. The Pier 2 footing would be constructed immediately above the sand and gravel (**Layer 3**), and will not require remediation prior to construction.

The required geotechnical resistance factor for shallow foundations (Φ_b) is 0.45 (AASHTO 2012). For an assumed 10.0-foot wide footing installed at elevations of 673.4 and 665.5 feet, respectively, we estimate the Piers 1 and 2 foundations should be designed for a factored bearing resistance of 3,600 psf. The bearing capacity analysis was performed assuming no overburden and for the scour elevations shown in Table 1. If additional scour beyond Table 1 is anticipated the piers should be supported on deep foundations. A summary of the bearing capacity analysis is provided in Table 4. The maximum factored load would produce an estimated pier settlement of 1.0 inch over 10 years.

Table 4: Summary of Ohio Street Shallow Pier Foundation Recommendations

Structure Unit	Boring ID	Footing Base Elevation (feet)	Assumed Footing Width (feet)	Factored Bearing Resistance Available (psf)
South Pier #1	B-4	673.5	10.0	3,600
North Pier #2	B-2	665.5	10.0	3,600

5.2.2 Driven Piles

For deep foundations, Wang recommends the semi-integral abutments and piers be supported on steel H-piles. IDOT specifies the maximum nominal required bearing (R_{NMAX}) for each pile and states the factored resistance available (R_F) for a steel H-pile should be based on a geotechnical resistance factor (ϕ_G) of 0.55 (IDOT 2009). Nominal tip and side resistance were estimated using the methods and empirical equations presented in the latest *AGMU Memorandum 10.2 – Geotechnical Pile Design* (IDOT 2012a). The R_F , R_N , estimated pile tip elevations, and pile lengths for 12-inch diameter MSP (support slab, Section 5.1), HP12x53, HP14x73, and HP14x89 are summarized in Tables 5, 6, 7, and 8 respectively. The lengths shown in the tables include a 1-foot pile embedment into the abutments and piers.

The R_F estimates are governed by the relationship $R_F = \phi_G R_N - \phi_G (DD_R + S_C + L_{iq}) I_G - (\gamma_p)(\lambda_{IS}) DD_L$ (IDOT 2009). The long-term consolidation settlement of the fill (**Layer 1**) at both abutments due to the construction of the MSE walls is estimated at less than 0.4 inches and downdrag allowances will not be required at these locations. To ensure an appropriate degree of settlement has been completed at the time of pile driving, we recommend installing settlement plates immediately behind the proposed abutments at Stations 109+00 and 112+75. The plates should be installed offset from the centerline approximately 25 feet to monitor the settlement of the retaining wall widening. The settlement should be monitored for a minimum of 30 days prior to pile driving. The pile lengths extending through the MSE abutment wall will require coal tar epoxy (see Section 6.5, *Piling*) as per IDOT standard for corrosion protection (IDOT 2012b).

Structure Unit (Reference Boring)	Pile Cap Base Elevations (feet)	Required Nominal Bearing, R_N (kips)	Factored Geotechnical Loss (kips)	Factored Geotechnical Load Loss (kips)	Factored Resistance Available, R_F (kips)	Total Estimated Pile Length (feet)	Estimated Pile Tip Elevation (feet)
North Abutment (B-5)	687.00	364	0	0	200	40	627
		273	0	0	150	39	628
		182	0	0	100	38	629
		91	0	0	50	37	630
		418	0	0	230	58	630
		364	0	0	200	57	631
		273	0	0	150	57	631
		182	0	0	100	50	632
		91	0	0	50	32	656

Table 7: Estimated Pile Lengths and Tip Elevations for HP14x73 Steel Piles

Structure Unit (Reference Boring)	Pile Cap Base Elevations (feet)	Required Nominal Bearing, R_N (kips)	Factored Geotechnical Loss (kips)	Factored Geotechnical Load Loss (kips)	Factored Resistance Available, R_F (kips)	Total Estimated Pile Length (feet)	Estimated Pile Tip Elevation (feet)
South Abutment (B-1)	693.30	578	0	0	318	69	625
		500	0	0	275	68	626
		409	0	0	225	64	630
		273	0	0	150	53	641
		136	0	0	75	20	674
Pier 1 (B-4)	673.40	578	0	0	318	50	624
		500	0	0	275	49	625
		409	0	0	225	49	625



Structure Unit (Reference Boring)	Pile Cap Base Elevations (feet)	Required Nominal Bearing, R_N (kips)	Factored Geotechnical Loss (kips)	Factored Geotechnical Load Loss (kips)	Factored Resistance Available, R_F (kips)	Total Estimated Pile Length (feet)	Estimated Pile Tip Elevation (feet)
Pier 2 (B-2)	665.50	273	0	0	150	48	626
		136	0	0	75	40	634
		578	0	0	318	41	626
		500	0	0	275	40	627
		409	0	0	225	40	627
		273	0	0	150	38	629
North Abutment (B-5)	687.00	136	0	0	75	37	630
		578	0	0	318	58	630
		500	0	0	275	57	631
		409	0	0	225	57	631
		273	0	0	150	55	633
		136	0	0	75	40	648

Table 8: Estimated Pile Lengths and Tip Elevations for HP14x89 Steel Piles

Structure Unit (Reference Boring)	Pile Cap Base Elevations (feet)	Required Nominal Bearing, R_N (kips)	Factored Geotechnical Loss (kips)	Factored Geotechnical Load Loss (kips)	Factored Resistance Available, R_F (kips)	Total Estimated Pile Length (feet)	Estimated Pile Tip Elevation (feet)
South Abutment (B-1)	693.30	705	0	0	388	70	624
		545	0	0	300	69	625
		409	0	0	225	63	631
		273	0	0	150	52	642
		136	0	0	75	19	675

Structure Unit (Reference Boring)	Pile Cap Base Elevations (feet)	Required Nominal Bearing, R_N (kips)	Factored Geotechnical Loss (kips)	Factored Geotechnical Load Loss (kips)	Factored Resistance Available, R_F (kips)	Total Estimated Pile Length (feet)	Estimated Pile Tip Elevation (feet)
Pier 1 (B-4)	673.40	705	0	0	388	51	623
		545	0	0	300	50	624
		409	0	0	225	49	625
		273	0	0	150	47	627
		136	0	0	75	39	635
Pier 2 (B-2)	665.50	705	0	0	388	41	626
		545	0	0	300	40	627
		409	0	0	225	39	628
		273	0	0	150	38	629
		136	0	0	75	37	630
North Abutment (B-5)	687.00	705	0	0	388	59	629
		545	0	0	300	59	629
		409	0	0	225	57	631
		273	0	0	150	54	634
		136	0	0	75	39	649

5.2.3 Lateral Loading

Lateral loads on piles should be analyzed for maximum moments and lateral deflections. Recommended lateral soil modulus parameters and soil strain parameters required for analysis via the p-y curve method are included in Table 9. Due to the groundwater elevation, all granular soils from Layer 3 should be considered under submerged (effective) conditions.

Table 10: Estimated Granular Backfill Parameters

Soil Description	Porous Granular Material Backfill
Unit Weight	125 pcf
Angle of Effective Internal Friction	32°
Active Earth Pressure Coefficient	0.31
Passive Earth Pressure Coefficient	3.26
At-Rest Earth Pressure Coefficient	0.5

6.4 Earthwork Operations

The required earthwork can be accomplished with conventional construction equipment. Moisture and traffic will cause deterioration of exposed subgrade soils. Precautions should be taken by the contractor to prevent water erosion of the exposed subgrade. A compacted subgrade will minimize water runoff erosion.

Earth moving operations should be scheduled to not coincide with excessive cold or wet weather (early spring, late fall or winter). Any soil allowed to freeze or soften due to the standing water should be removed. Wet weather can cause problems with subgrade compaction. It is recommended that an experienced geotechnical engineer be retained to inspect the exposed subgrade, monitor earthwork operations, and provide material inspection services during the construction phase of this project.

6.5 Piling

Driven piles shall be furnished and installed according to the requirements of IDOT Section 512, *Piling* (IDOT 2012a) and steel H-piles shall be according to AASHTO M270, Grade 50. Wang recommends a minimum of one test pile be performed at each abutment and pier location. Test piles should be driven to 110 percent of the nominal required bearing indicated above in Tables 6, 7, and 8 of Section 5.2. We do not identify soils that would require driving with a metal shoe. Piles installed within the MSE walls should be coated with coal tar epoxy as per Section 3.10.1.9 of the IDOT *Bridge Manual* (IDOT 2012a).

7.0 QUALIFICATIONS

The analysis and recommendations submitted in this report are based upon the data obtained from

the borings drilled at the locations shown on the boring logs and in Exhibit 3. This report does not reflect any variations that may occur between the borings or elsewhere on the site, variations whose nature and extent may not become evident until the course of construction. In the event that any changes in the design and/or location of the bridge are planned, we should be timely informed so that our recommendations can be adjusted accordingly.

It has been a pleasure to assist TranSystems Corporation and the Illinois Department of Transportation on this project. Please call if there are any questions, or if we can be of further service.

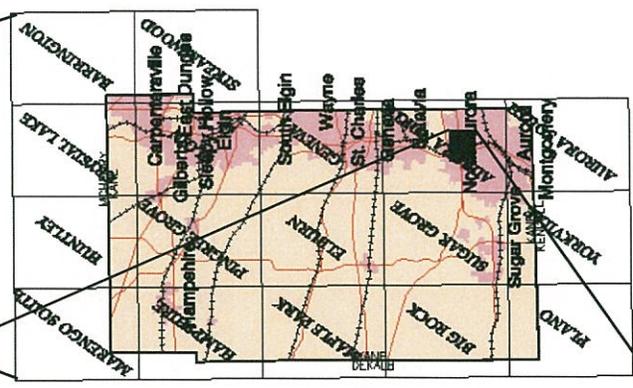
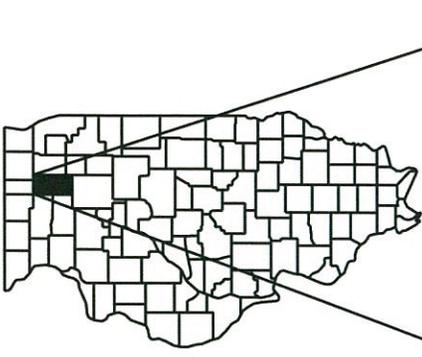
Respectfully Submitted,

WANG ENGINEERING, INC.

Mickey L. Snider, P.E.
Senior Geotechnical Engineer

Jerry W.H. Wang, PhD., P.E.
QA/QC Reviewer

EXHIBITS



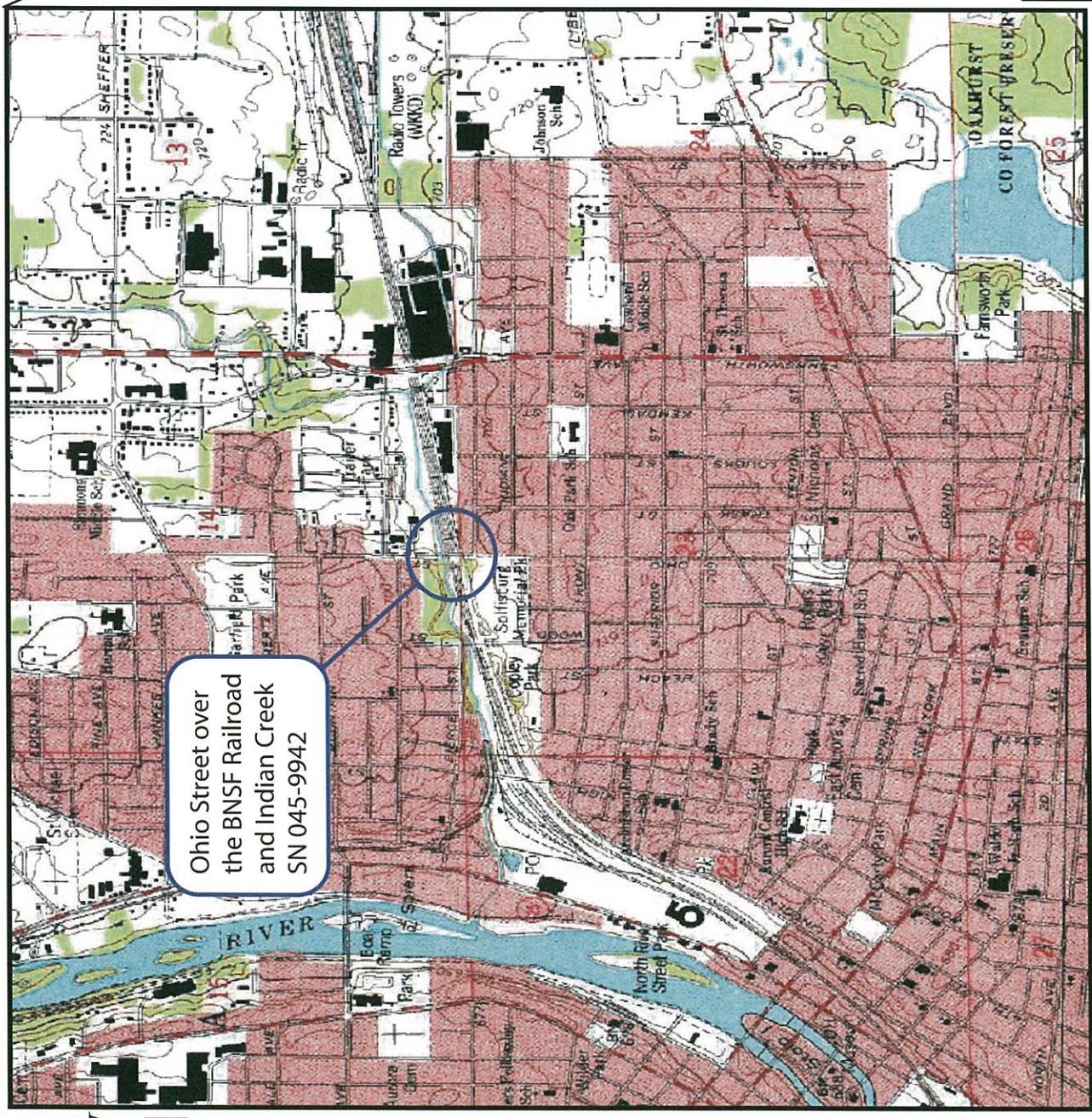
Kane County

SITE LOCATION MAP: OHIO STREET OVER THE BNSF AND INDIAN CREEK; SN 045-9942; SEC 08-00278-00-BR; KANE COUNTY

SCALE: GRAPHIC EXHIBIT 1 DRAWN BY: END CHECKED BY: MLS

Wang Engineering
 1145 N. Main Street
 Lombard, IL 60148
 www.wangeng.com

FOR TRANSSYSTEMS CORPORATION 790-63-01

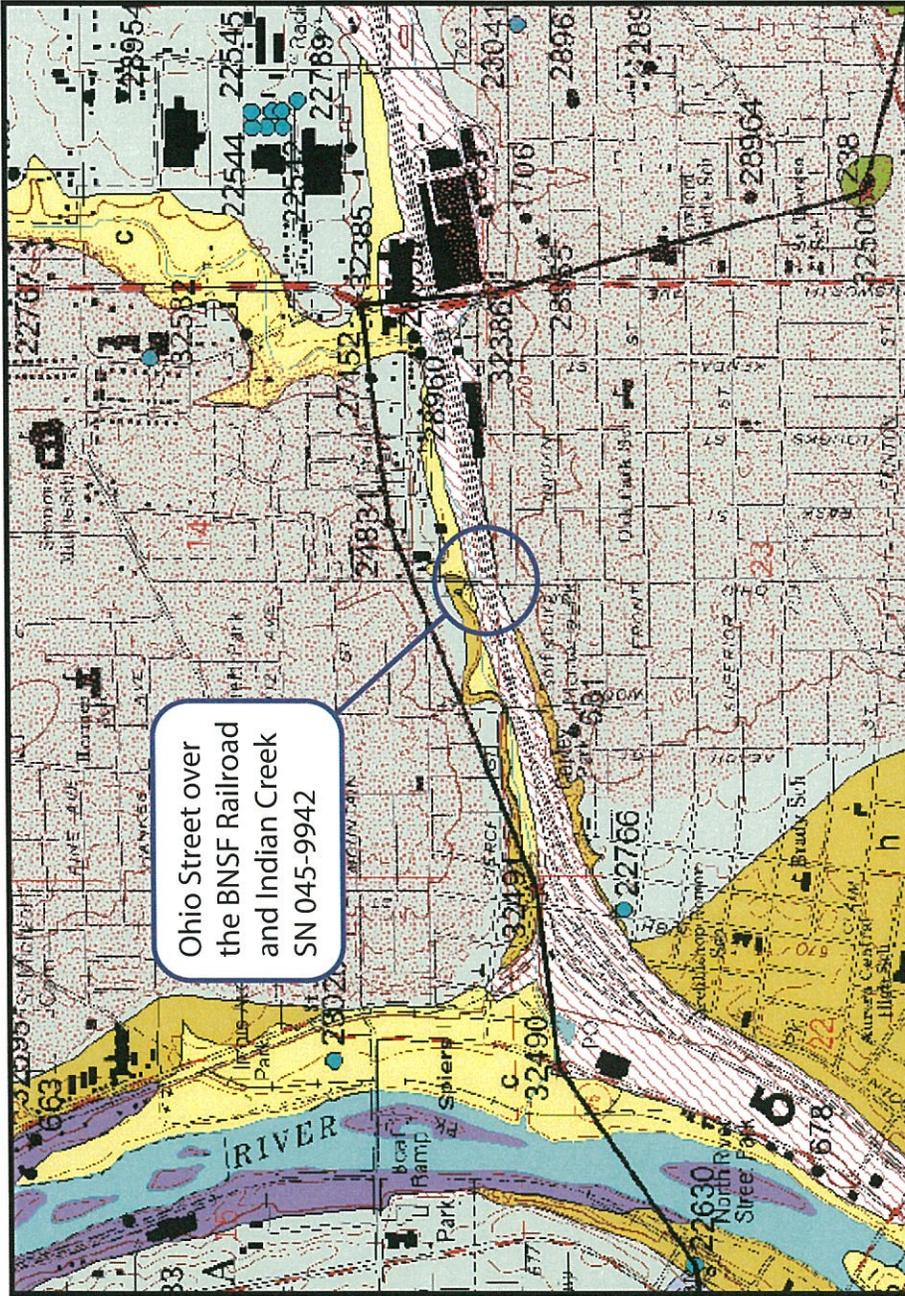


Ohio Street over the BNSF Railroad and Indian Creek SN 045-9942

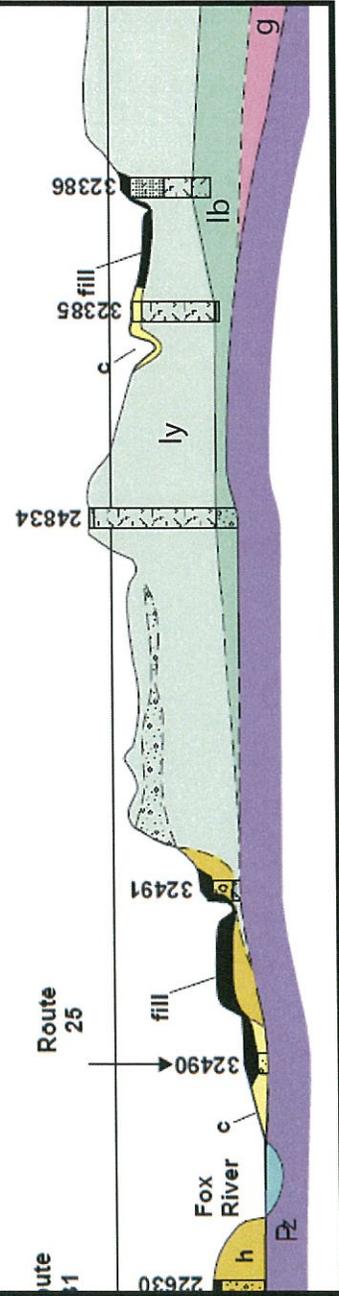




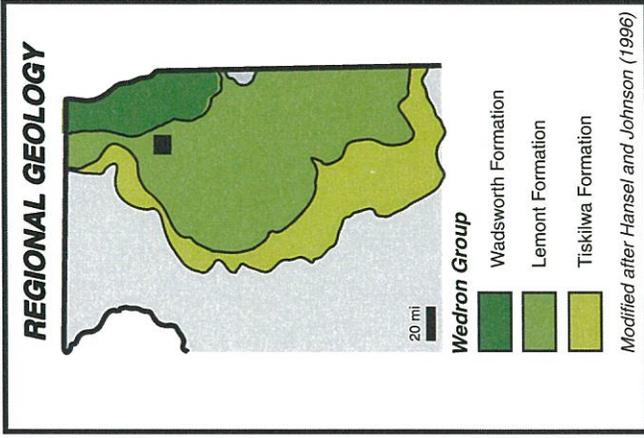
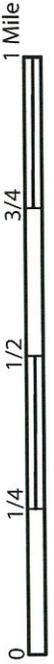
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Ohio Street over the BNSF Railroad and Indian Creek
SN 045-9942



After Curry (2001)



REGIONAL GEOLOGY

- Wedron Group**
 Wadsworth Formation
 Lemont Formation
 Tiskilwa Formation

Modified after Hansel and Johnson (1996)

- gp** Grayslake Peat
Decomposed wetland vegetation and sediment
Peat and muck, commonly associated with lake sediments of Equality Formation
- c** Cohokia Formation
Modern Floodplain Sediment
Sand and gravel, and well-sorted sand adjacent to streams
- h** Henry Formation
Outwash deposited along valleys
Sand and gravel, or sand; contains lenses of silt and clay or diamiction
- ly** Yorkville Member, Lemont Formation
Till and debris flow deposits
Diamiction; silty clay silty clay loam, and clay with layers and lenses of sand and gravel or silt
- Moraine**
Moraine

SITE AND REGIONAL GEOLOGY: OHIO STREET OVER THE BNSF AND INDIAN CREEK; SN 045-9942; SEC 08-00278-00-BR; KANE COUNTY

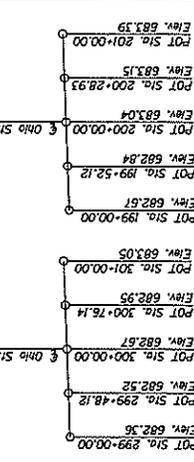
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1145 N. Main Street
Lombard, IL 60148
www.wangeng.com

FOR TRANSSYSTEMS CORPORATION 790-63-01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PROFILE GRADE
(Top of Rail BNSF Tract #1)
(Looking North)

PROFILE GRADE
(Top of Rail BNSF Tract #2)
(Looking North)

EXHIBIT 3-1

Wang Engineering

FOR TRANSSYSTEMS CORPORATION 790-63-01

SCALE GRAPHIC

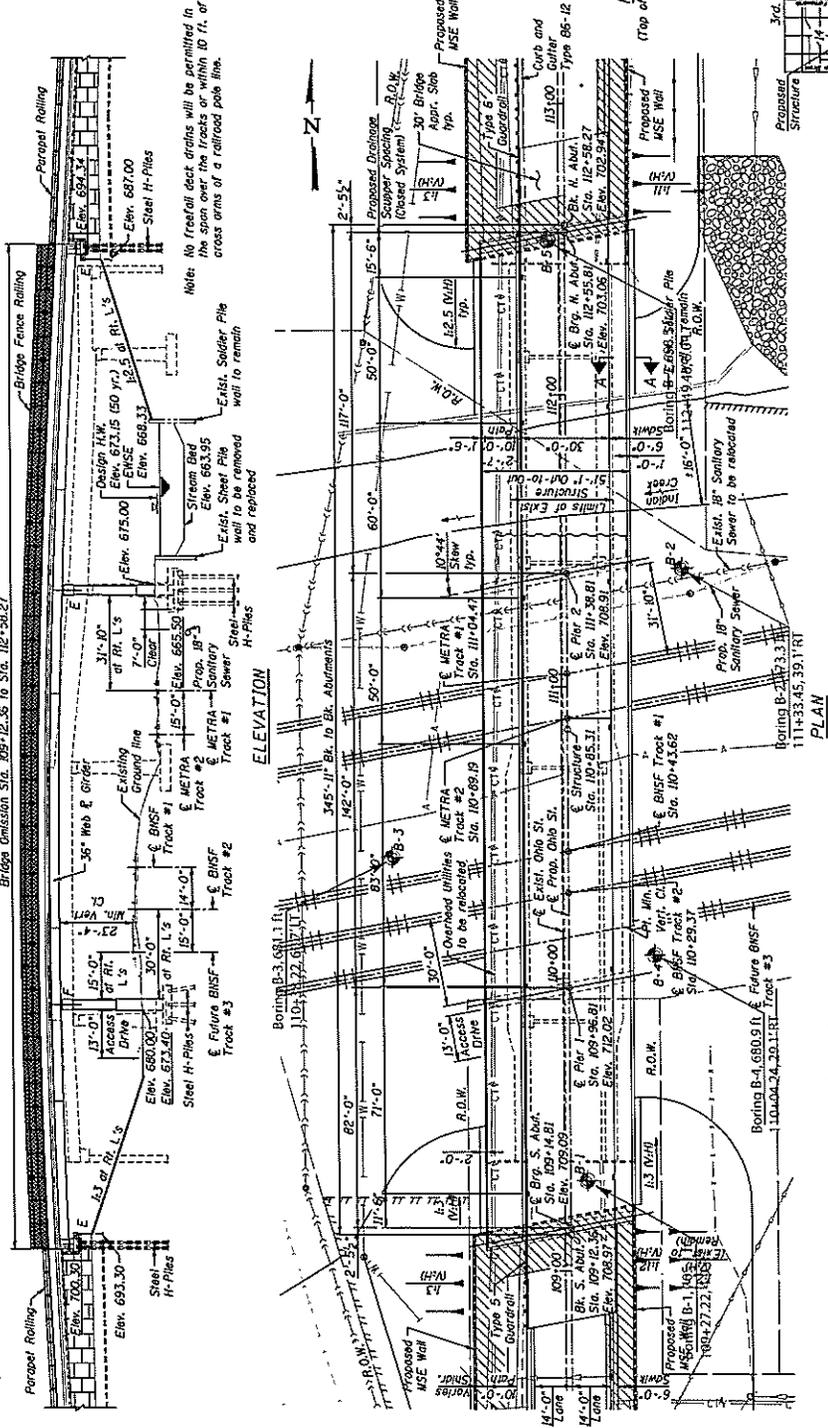
DATE: 11/15/11
DRAWN BY: GJD
CHECKED BY: MLS

1145 N. Main Street
Lombard, IL 60148
www.wangeng.com

Bench Marks: 5/8" rebar with yellow cap west of Ohio Street bridge EA 673.30

Existing Structure: SH 045-6943. Constructed in 1923. Five-span bridge that measures 310'-4 1/2" back to back of abutments. Out-to-out width varies. Span 1 and Span 3 thru 5 have an out-to-out width of 35'-0". Span 2 has an out-to-out width of 33'-8". Span 1 is supported by two 48" deep steel girders and floorbeam system. Span 3 and Span 4 are supported by two 95" steel through girders with no floorbeam system. Span 5 is supported by six rolled steel beams. Substructure is pile bent abutments and concrete piers on spread footings. The existing bridge is to be removed and replaced. The road will be closed and traffic detoured during construction.

No sawlogs.



PROFILE GRADE
(Top of Rail Future BNSF Tract #3)
(Looking North)

DESIGN SCOUR ELEVATION TABLE

Channel Scour Elevation (ft.)	Prop. 3	R. Anal.	Existing
665.50	667.00		

WATERWAY INFORMATION

Drainage Area = 16.2 mi² Low Creek Elev. 703.03 at Sta. 112+56.46

Freq.	C.F.S.	Exst. Prop.	H.M.E.	Exst. Prop.	Head - Ft.	Headwater EL.	
10	0.061	199	202	197.76	0.17	0.09	670.87
50	2.311	312	316	673.15	0.33	0.07	673.51
100	2.962	356	362	675.98	0.42	0.09	676.40
Max. Cons.	500	4331	435	675.36	1.23	0.86	676.62

ELEVATION

DESIGN SPECIFICATIONS

2019 IAS/ITD 1570 Bridge Design Specifications (SR Edition)

DESIGN STRESSES

FIELD UNITS

f_c = 3,500 psi (Cast-in-Place)

f_y = 60,000 psi (Reinforcement)

f_c = 50,000 psi (U270 Grade 80) PRECAST BRIS

f_c = 4,500 psi (Precast Panels)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1

Design Spectral Acceleration at 1.0 sec. (S_{a1}) = 0.091g

Design Spectral Acceleration at 0.2 sec. (S_{a2}) = 0.161g

Soil Site Class = D

LOADING CLASSIFICATION

Ohio Street

Functional Class: Collector (Urban)

ADT: 12,200 (2009), 14,000 (2030)

DH: 1,200 (2030)

Design Speed: 50 m.p.h.

Posted Speed: 30 m.p.h.

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

GENERAL PLAN

OHIO STREET

OVER BNSF, METRA AND INDIAN CREEK

SEC. 08-0027B-00-BR

KANE COUNTY

STATION 110+85.31

STRUCTURE NO. 045-9942

LOCATION SKETCH

SHEET NO. 1

E.A. R.T.C.

SECTION

COUNTY

TOTAL SHEETS

NO. 4

NO. 4

CONTRACT NO.

FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT

DESIGNED: MDS

CHECKED: SLC

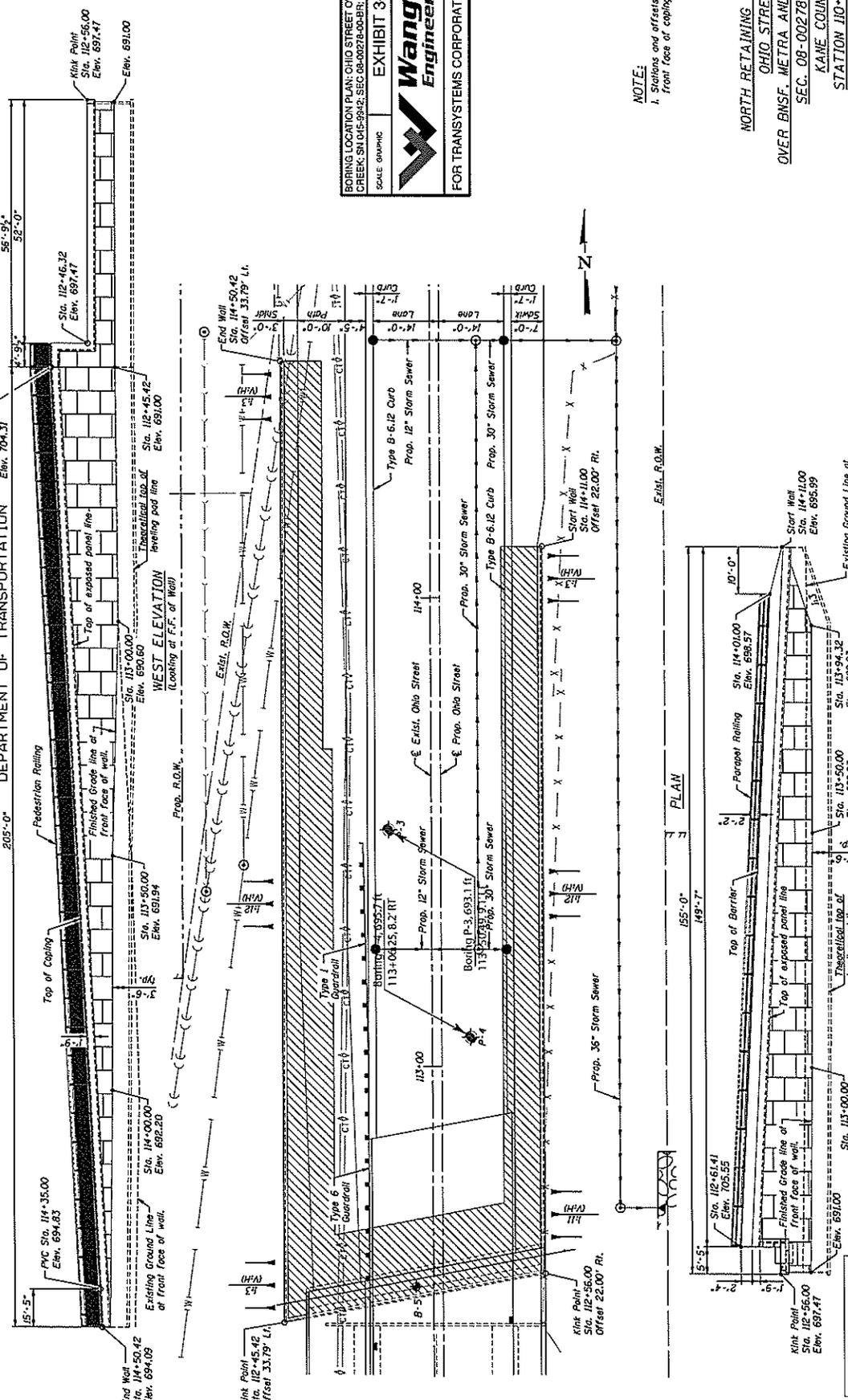
DRAWN: MDS

CHECKED: SLC

11/15/11 04:18 PM - MSL

122

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



205'-0"

15'-5"

55'-9 1/2"

52'-0"

114'-315.00

114'-315.00

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114'-315.00

BOILING LOCATION PLAN: OHIO STREET OVER THE BNSF AND INDIAN CREEK; SN 08-00278-00-BR; KANE COUNTY

SCALE: GRAPHIC

EXHIBIT 3-3

DRIVEN BY: END

CHECKED BY: JLS

Wang Engineering

145 N. Main Street
Normal, IL 61701
www.wangeng.com

FOR TRANSSYSTEMS CORPORATION 790-63-01

NOTE:
1. Stations and offsets are along the front face of coping or moment slab.

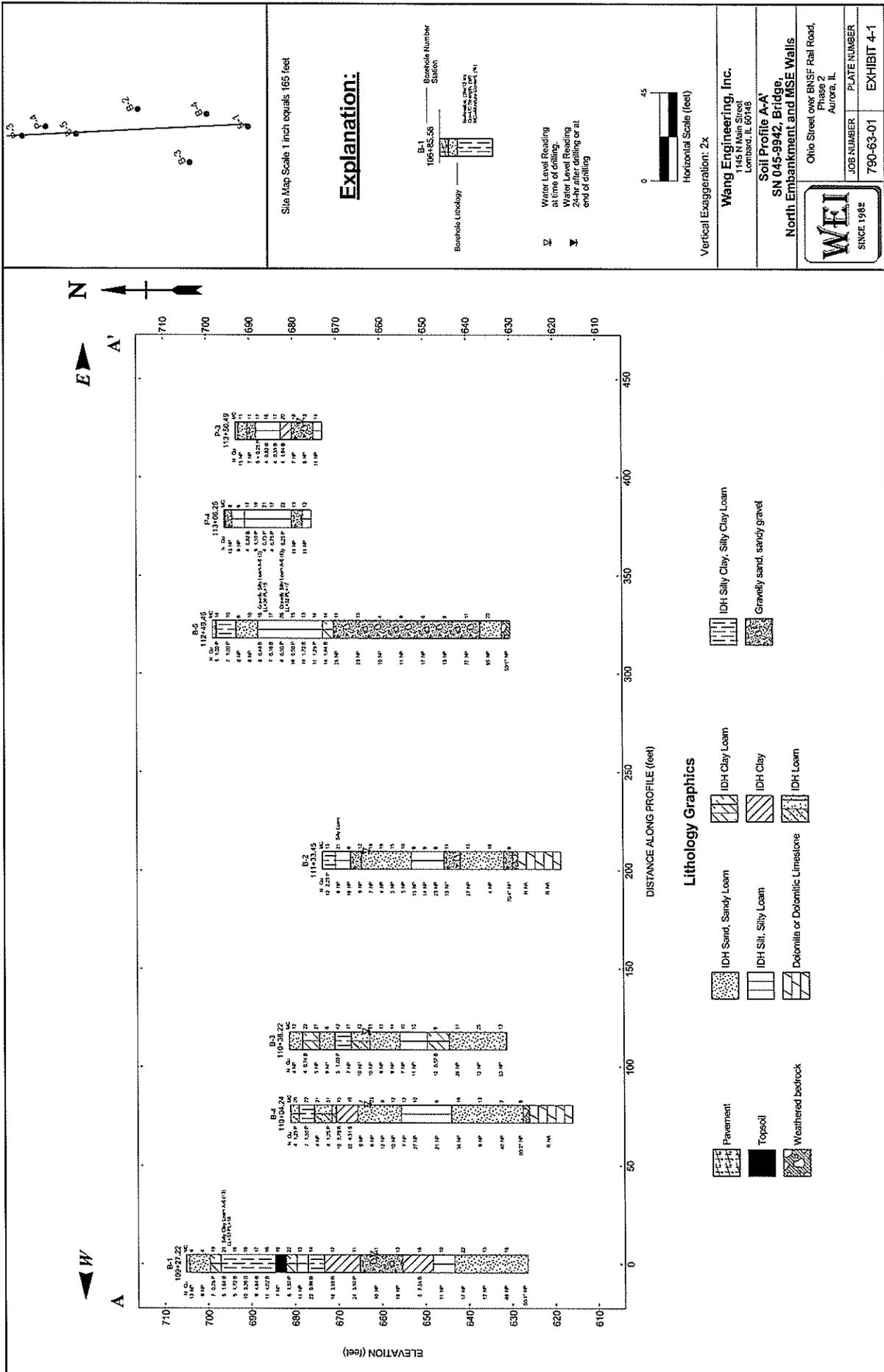
NORTH RETAINING WALL PLAN
OHIO STREET
OVER BNSF, METRA AND INDIAN CREEK
KANE COUNTY
SECTION 08-00278-00-BR
STATION 110+85.31
STRUCTURE NO. 045-9942

SHEET NO. 3	F.A. RT.	SECTION	COUNTY	TOTAL SHEETS NO.
4		08-00278-00-BR	KANE	4
SHEETS			CONTRACT NO.	
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			EXHIBIT 3-3	

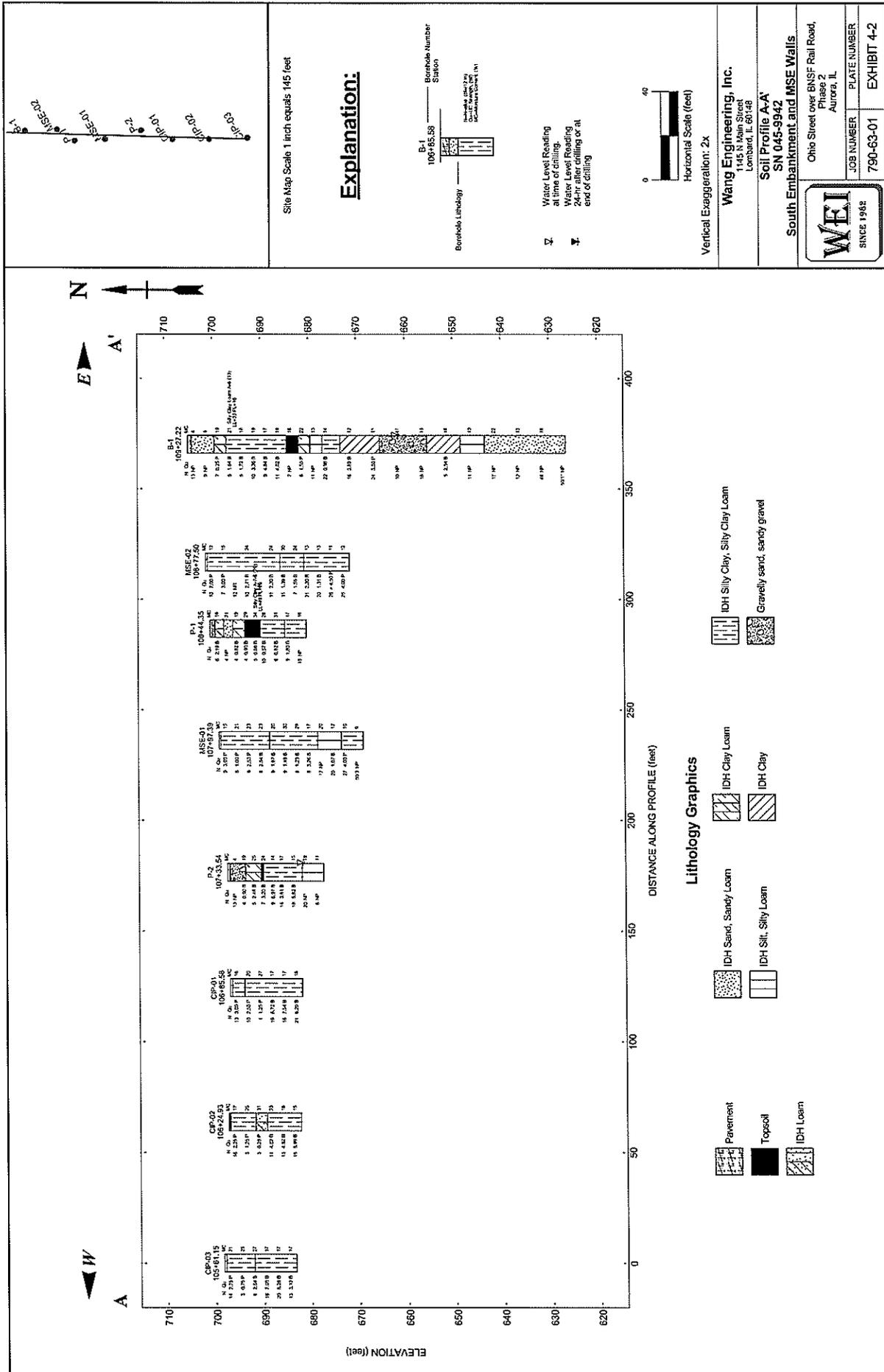
TRANSYSTEMS

140 E. Woodland Park, Suite 200
Normal, IL 61701
Phone: (815) 261-2000
Fax: (815) 261-2001

DESIGNED	MDS
CHECKED	SJC
DRAWN	MDS
CHECKED	SJC



181R 11X11 WANG ENG.GDT 1/81



WEI 11x17 7909301.GPJ WANGENG.GDT 4/8/13

Site Map Scale 1 inch equals 145 feet

Explanation:

Borehole Lithology

Borehole Number
B-1
100+65.58

Vertical Exaggeration: 2x

Horizontal Scale (feet)

Wang Engineering, Inc.
1445 N. Main Street
Lombard, IL 60148

Soil Profile A-A'
SN 045-9942

South Embankment and MSE Walls
Ohio Street over BNSF Rail Road,
Phase 2
Aurora, IL

WEI
SINCE 1982

JOB NUMBER
790-63-01

PLATE NUMBER
EXHIBIT 4-2

APPENDIX A



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 Fax: 630 953-9938

BORING LOG B-1

WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 705.07 ft
 North: 1857877.72 ft
 East: 995717.09 ft
 Station: 109+27.22
 Offset: 4.91 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	704.3	9-inch thick ASPHALT --PAVEMENT--								684.6	Loose, brown SILTY LOAM --BURIED TOPSOIL--						
		Loose to medium dense, brown, fine SAND --FILL--		X	1	3 6 7	NP	4					X	9	3 3 4	NP	16
				X	2	3 4 5	NP	4		682.1	Stiff, black and brown CLAY LOAM --FILL--		X	10	2 3 5	1.50 P	22
			5														
	699.6	Soft, dark brown CLAY LOAM --FILL--		X	3	2 5 2	0.25 P	19		679.6	Medium dense, brown SILT with gravel		X	11	5 5 6	NP	13
				X	4	3 2 3	1.64 B	21		677.1	Medium stiff, brown SILTY CLAY		X	12	3 7 15	0.98 B	14
	697.1	Stiff to hard, brown SILTY CLAY LOAM --FILL-- -L _L = 33%, P _L = 16%-- --% Gravel = 4.3%-- --% Sand = 9.8%-- --% Silt = 59.1%-- --% Clay = 26.8%--		X	5	3 2 3	1.72 B	18					X	13	11 9 9	3.69 B	12
				X	6	2 4 6	3.36 B	18		673.3	Very stiff, gray CLAY		X	14	7 12 12	3.50 P	11
			15														
				X	7	2 4 5	4.84 B	17									
				X	8	4 4 7	4.02 B	18		665.1			X				
			20														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **08-31-2009** Complete Drilling **08-31-2009**
 Drilling Contractor **Wang Testing Services** Drill Rig **Mobile B-57 TMR**
 Driller **J&J** Logger **A. Kurnia** Checked by **E. Datz**
 Drilling Method **4.25-inch IDA HSA**

While Drilling **44.00 ft**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG B-1

WEI Job No.: 790-63-01

Client **Transystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 705.07 ft
 North: 1857877.72 ft
 East: 995717.09 ft
 Station: 109+27.22
 Offset: 4.91 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Medium dense, brown SANDY GRAVEL								643.3	Medium dense to very dense, gray, fine to medium SAND						
			45	X	15	3 4 6	NP	11				65	X	19	3 4 13	NP	22
	655.3	Very stiff, gray CLAY	50	X	16	3 7 11	NP	13				70	X	20	5 3 9	NP	13
			55	X	17	3 2 3	2.54 B	18				75	X	21	16 25 23	NP	18
	648.3	Medium dense, gray SILT								626.5	Boring terminated at 78.58 ft			22	50/1"	NP	
			60	X	18	8 6 5	NP	10				80					

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **08-31-2009** Complete Drilling **08-31-2009**
 Drilling Contractor **Wang Testing Services** Drill Rig **Mobile B-57 TMR**
 Driller **J&J** Logger **A. Kurnia** Checked by **E. Datz**
 Drilling Method **4.25-inch IDA HSA**

While Drilling ▽ **44.00 ft**
 At Completion of Drilling ▼ **DRY**
 Time After Drilling **NA**
 Depth to Water ▽ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG B-2

WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 673.34 ft
 North: 1858084.48 ft
 East: 995749.14 ft
 Station: 111+33.45
 Offset: 39.11 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Stiff to very stiff, brown SILTY CLAY --FILL--			1	2 6 6	2.25 P	15		652.8	Medium dense, gray SILTY LOAM with some to little gravel			9	6 6 9	NP	9
	670.3	Loose, brown SILTY LOAM --FILL-- --% Gravel = 3.9%-- --% Sand = 31.3%-- --% Silt = 53.1%-- --% Clay = 11.7%--			2	2 3 3	NP	21				25		10	6 7 7	NP	9
	666.8	Medium dense, brown GRAVELLY SAND --FILL--			3	3 6 10	NP	6						11	11 12 11	NP	8
	664.3	Loose, brown and gray, fine to medium SAND with little gravel			4	4 4 5	NP	12		645.3	Medium dense, brown GRAVELLY SAND			12	8 9 10	NP	11
					5	2 3 4	NP	18		641.6	Loose to medium dense, gray, fine SANDY LOAM						
					6	2 2 2	NP	19				35		13	3 11 16	NP	13
					7	3 2 3	NP	15									
					8	2 2 3	NP	10				40		14	1 2 2	NP	18

GENERAL NOTES

Begin Drilling **11-02-2009** Complete Drilling **11-02-2009**
 Drilling Contractor **Groff Testing Corporation** Drill Rig **CME**
 Driller **T&K** Logger **B. Wilson** Checked by **E. Datz**
 Drilling Method **3.25-inch**

WATER LEVEL DATA

While Drilling **11.00 ft**
 At Completion of Drilling **WASHED**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG B-3

WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 681.12 ft
 North: 1857987.68 ft
 East: 995650.29 ft
 Station: 110+38.22
 Offset: 60.74 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Loose, dark brown SANDY LOAM with some gravel --FILL--			1	3 2 2	NP	12						9	5 5 4	NP	13
	678.1	Medium stiff, brown CLAY LOAM with little gravel --FILL--			2	1 2 2	0.74 B	22				25		10	3 4 5	NP	14
	674.1	Loose, black and brown, fine to coarse SAND and SANDY LOAM with cinders --FILL--			3	3 2 3	NP	27						11	3 3 4	NP	10
	670.6	Loose, black and brown, fine to coarse SAND and SANDY LOAM with cinders --FILL--			4	9 5 4	NP	6				30		12	4 6 5	NP	10
	670.6	Stiff, brown SILTY CLAY			5	3 2 3	1.00 P	42									
	666.9	Loose to medium dense, brown and gray LOAM with some gravel			6	2 3 4	NP	17				35		13	4 4 8	0.57 B	9
	662.6	Loose to medium dense, brown and gray, fine to coarse SAND with some gravel			7	8 5 5	NP	12									
	662.6	Loose to medium dense, brown and gray, fine to coarse SAND with some gravel			8	3 5 5	NP	13				40		14	22 16 12	NP	11
										655.6	Loose to medium dense, gray SILTY LOAM with little gravel						
										649.4	Medium stiff, gray CLAY LOAM with some gravel						
										644.4	Medium dense to dense, gray, medium to coarse SAND with some gravel						

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **11-04-2009** Complete Drilling **11-04-2009**
 Drilling Contractor **Groff Testing Corporation** Drill Rig **CME**
 Driller **T&K** Logger **B. Wilson** Checked by **E. Datz**
 Drilling Method **3.25-inch**

While Drilling **18.50 ft**
 At Completion of Drilling **WASHED**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG B-3

WEI Job No.: 790-63-01

Client Transsystems Corporation
 Project Ohio Street over BNSF Rail Road, Phase 2
 Location Aurora, IL

Datum: NAVD88
 Elevation: 681.12 ft
 North: 1857987.68 ft
 East: 995650.29 ft
 Station: 110+38.22
 Offset: 60.74 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	631.1		45		15	3 4 8	NP	25									
			50		16	14 23 30	NP	13									
		Boring terminated at 50.00 ft															
			55														
			60														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling 11-04-2009 Complete Drilling 11-04-2009
 Drilling Contractor Groff Testing Corporation Drill Rig CME
 Driller T&K Logger B. Wilson Checked by E. Datz
 Drilling Method 3.25-inch

While Drilling 18.50 ft
 At Completion of Drilling WASHED
 Time After Drilling NA
 Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG B-4

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WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 680.91 ft
 North: 1857955.12 ft
 East: 995740.44 ft
 Station: 110+04.24
 Offset: 29.07 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	678.9	Loose, brown, gravelly LOAM --FILL--			1	5 2 2	1.25	26						9	9 7 5	NP	9
		Stiff, brown SILTY CLAY to SILTY CLAY LOAM --FILL--			2	2 3 4	1.50	22				25		10	4 5 5	NP	12
	675.4	Loose, brown LOAM with little gravel --FILL--			3	1 1 3	NP	21						11	1 2 5	NP	12
	671.4	Stiff, brown CLAY LOAM with some gravel --FILL--	10		4	1 1 3	1.25	31				30		12	3 12 15	NP	10
	670.4	Very stiff to hard, brown and gray CLAY with little gravel			5	3 4 6	2.79	15									
					6	6 10 12	4.51	16				35		13	9 9 12	NP	9
	665.4	Loose to medium dense, brown and gray, fine to coarse SAND with some gravel.			7	7 5 4	NP	7									
					8	2 2 4	NP	23				40		14	11 14 20	NP	16
										655.4	Loose to medium dense, gray SILTY LOAM with some gravel						
										643.9	Loose to dense, gray, fine to coarse SAND and SANDY LOAM with some gravel						

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **11-03-2009** Complete Drilling **11-03-2009**
 Drilling Contractor **Groff Testing Corporation** Drill Rig **CME**
 Driller **T&K** Logger **B. Wilson** Checked by **R. Gorlagunta**
 Drilling Method **.3.25-inch**

While Drilling ∇ **18.50 ft**
 At Completion of Drilling ∇ **WASHED**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 7906301.GPJ WANGENG.GDT 4/8/13

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BORING LOG B-4

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WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 680.91 ft
 North: 1857955.12 ft
 East: 995740.44 ft
 Station: 110+04.24
 Offset: 29.07 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	2 3 6	NP	13		615.9		65		18			
			50		16	14 18 22	NP	7			Boring terminated at 65.00 ft						
	627.4	Weathered dolostone bedrock -AUGER REFUSAL @ 55.0'-	55		17	60/2"	NP	9									
	625.9	Strong, fair quality, light gray DOLOSTONE with SHALE interbeds RUN#1 55.0' to 65.0' RECOVERY=100% RQD=58%	60														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **11-03-2009** Complete Drilling **11-03-2009**
 Drilling Contractor **Groff Testing Corporation** Drill Rig **CME**
 Driller **T&K** Logger **B. Wilson** Checked by **R. Gorlagunta**
 Drilling Method **3.25-inch**

While Drilling ∇ **18.50 ft**
 At Completion of Drilling ∇ **WASHED**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 7906301.GPJ WANGENG.GDT 4/8/13

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BORING LOG B-5

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WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 698.53 ft
 North: 1858199.78 ft
 East: 995702.86 ft
 Station: 112+49.46
 Offset: 5.97 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
										636.8	Very dense, brown, fine SANDY LOAM						
			45	X	15	6 4 7	NP	9				65	X	19	12 15 80	NP	20
										631.8	Weathered dolostone bedrock						
			50	X	16	5 6 11	NP	6		630.0	Boring terminated at 68.58 ft			20	50/1"	NP	
			55	X	17	7 8 11	NP	8									
			60	X	18	18 40 37	NP	11									

GENERAL NOTES

Begin Drilling **08-25-2009** Complete Drilling **08-25-2009**
 Drilling Contractor **Wang Testing Services** Drill Rig **Mobile B-57 TMR**
 Driller **B&K** Logger **A. Kurnia** Checked by **E. Datz**
 Drilling Method **4.25-inch IDA HSA**

WATER LEVEL DATA

While Drilling **DRY**
 At Completion of Drilling **WASHED**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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WANGENG 7906301.GPJ WANGENG.GDT 4/8/13



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BORING LOG CIP-01

WEI Job No.: 790-63-01

Client Transystems Corporation
 Project Ohio Street over BNSF Rail Road, Phase 2
 Location Aurora, IL

Datum: NAVD88
 Elevation: 696.76 ft
 North: 1857632.18 ft
 East: 995704.13 ft
 Station: 106+85.58
 Offset: 7.76 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	696.35	696.35-inch thick ASPHALT --PAVEMENT-- Very stiff, brown SILTY CLAY --FILL--			1	7 6 7	3.00 P	16									
	693.8	Stiff to hard, brown SILTY CLAY to SILTY CLAY LOAM, trace gravel	5		2	4 5 5	2.50 P	20									
					3	2 1 3	1.25 P	27									
			10		4	5 8 11	6.72 B	17									
					5	4 8 10	7.54 B	17									
					6	7 9 12	8.20 B	18									
	681.8	Boring terminated at 15.00 ft	15														
			20														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling 03-01-2013 Complete Drilling 03-01-2013
 Drilling Contractor Wang Testing Services Drill Rig D-50
 Driller R&N Logger A. Muhammed Checked by M. Snider
 Drilling Method 4.0" DIA SFA; Boring backfilled upon completion

While Drilling ∇ DRY
 At Completion of Drilling ∇ DRY
 Time After Drilling NA
 Depth to Water ∇ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG CIP-02

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WEI Job No.: 790-63-01

Client Transsystems Corporation
 Project Ohio Street over BNSF Rail Road, Phase 2
 Location Aurora, IL

Datum: NAVD88
 Elevation: 697.22 ft
 North: 1857571.53 ft
 East: 995704.25 ft
 Station: 106+24.93
 Offset: 8.20 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	696.94	inch thick ASPHALT --PAVEMENT-- Stiff to very stiff, brown SILTY CLAY LOAM to CLAY LOAM --FILL--			1	9 8 8	2.25 P	17									
			5		2	1 2 1	1.25 P	25									
	691.7	Soft, brown and gray CLAY LOAM			3	1 2 1	0.25 P	31									
	689.2	Hard, brown SILTY CLAY, trace gravel			4	2 5 6	4.02 B	23									
			10		5	4 5 8	4.92 B	18									
					6	4 6 9	5.99 B	15									
	682.2	Boring terminated at 15.00 ft	15														
			20														

GENERAL NOTES

Begin Drilling 03-01-2013 Complete Drilling 03-01-2013
 Drilling Contractor Wang Testing Services Drill Rig D-50
 Driller R&N Logger A. Muhammed Checked by M. Snider
 Drilling Method 4.0" DIA SFA; Boring backfilled upon completion

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG 7906301.GPJ WANGENG.GDT 4/8/13



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BORING LOG CIP-03

WEI Job No.: 790-63-01

Client Transsystems Corporation
 Project Ohio Street over BNSF Rail Road, Phase 2
 Location Aurora, IL

Datum: NAVD88
 Elevation: 698.34 ft
 North: 1857507.77 ft
 East: 995706.52 ft
 Station: 105+61.15
 Offset: 7.59 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	697.95	5-inch thick ASPHALT --PAVEMENT--															
		Medium stiff to very stiff, brown and gray SILTY CLAY LOAM --FILL--			1	13 9 5	2.25 P	21									
			5		2	2 1 2	0.75 P	25									
	692.1	Very stiff to hard, brown SILTY CLAY, trace gravel			3	3 3 5	2.54 S	27									
			10		4	4 7 11	7.05 B	17									
					5	3 8 12	8.28 B	17									
			15		6	3 5 8	3.12 B	17									
	683.3	Boring terminated at 15.00 ft															
			20														

GENERAL NOTES

Begin Drilling 03-01-2013 Complete Drilling 03-01-2013
 Drilling Contractor Wang Testing Services Drill Rig D-50
 Driller R&N Logger A. Muhammed Checked by M. Snider
 Drilling Method 4.0" DIA SFA; Boring backfilled upon completion

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WATER LEVEL DATA

While Drilling ∇ DRY
 At Completion of Drilling ∇ DRY
 Time After Drilling NA
 Depth to Water ∇ NA

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BORING LOG MSE-01

WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 698.80 ft
 North: 1857744.00 ft
 East: 995704.00 ft
 Station: 107+97.39
 Offset: 6.86 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	698.54	4-inch thick ASPHALT --PAVEMENT-- Stiff to very stiff, brown SILTY CLAY LOAM --FILL--								678.3	Medium dense, brown SILT to SILTY LOAM						
			1		1	8 4 5	3.00 P	15				9		9	6 8 9	NP	20
			5		2	2 3 3	1.00 P	21				25		10	4 6 14	1.07 B	12
					3	3 3 6	2.50 P	23		673.3	Hard, gray SILTY CLAY, gravel and cobbles			11	11 13 14	4.00 P	10
			10		4	2 3 5	2.54 B	23				30		12	20 26 50/3	NP	9
	688.3	Stiff to very stiff, brown SILTY CLAY, trace gravel								668.8	Boring terminated at 30.00 ft						
			15		5	3 4 5	1.97 B	20									
					6	2 4 5	1.48 B	30									
					7	3 3 5	1.23 B	28									
			20		8	3 2 6	3.26 S	17									

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **03-01-2013** Complete Drilling **03-01-2013**
 Drilling Contractor **Wang Testing Services** Drill Rig **D-50**
 Driller **R&N** Logger **A. Muhammed** Checked by **M. Snider**
 Drilling Method **4.0" DIA SFA; Boring backfilled upon completion**

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

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BORING LOG MSE-02

WEI Job No.: 790-63-01

Client Transsystems Corporation
 Project Ohio Street over BNSF Rail Road, Phase 2
 Location Aurora, IL

Datum: NAVD88
 Elevation: 701.48 ft
 North: 1857824.32 ft
 East: 995719.51 ft
 Station: 108+77.50
 Offset: 9.41 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	701.24	701.24-inch thick ASPHALT --PAVEMENT-- Very stiff, brown SILTY CLAY to SILTY CLAY LOAM, gravel and cobbles								681.0	Stiff to hard, brown and gray SILTY CLAY, gravel and cobbles						
			1	X	1	4 5 5	2.00 P	12				9	X	9	3 5 16	2.30 B	13
			5	X	2	4 3 4	3.00 P	15				25	X	10	5 7 13	1.31 B	13
				O	3	5 6 6	NR						X	11	8 12 14	4.50 P	11
			10	X	4	3 4 6	2.71 B	24				30	X	12	15 12 13	4.00 P	12
				O	5	4 6 5	NR			671.5	Boring terminated at 30.00 ft						
			15	X	6	3 5 6	2.30 B	24				35					
	686.0	Stiff, brown SILTY CLAY LOAM, trace gravel															
				X	7	3 4 7	1.39 B	30									
			20	X	8	2 3 4	1.56 B	24				40					

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling 03-01-2013 Complete Drilling 03-01-2013
 Drilling Contractor Wang Testing Services Drill Rig D-50
 Driller R&N Logger A. Muhammed Checked by M. Snider
 Drilling Method 4.0" DIA SFA; Boring backfilled upon completion

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG P-1

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WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 700.58 ft
 North: 1857794.59 ft
 East: 995701.32 ft
 Station: 108+44.35
 Offset: 11.72 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	700.24	2.5-inch thick ASPHALT --PAVEMENT--															
	699.6	7-inch thick, GRAVELLY SAND --BASE COURSE--				5											
	697.8	Very stiff, brown, black and gray, mottled CLAY LOAM with gravel --FILL--			1	2 4 6	2.19 B	19									
	695.8	Loose, black and brown SAND with clay --FILL--			2	2 2 2 4	NP	21									
	693.3	Medium stiff, black and brown CLAY LOAM --FILL--			3	2 2 2 3	0.82 B	19									
	690.1	Medium stiff, black SILTY CLAY --BURIED TOPSOIL-- --L _L = 49%, P _L = 20%-- --% Gravel = 0.9%-- --% Sand = 7.8%-- --% Silt = 60.3%-- --% Clay = 31.0%--			4	2 2 2 4	0.90 B	29									
	690.1	Medium stiff, brown and black SILTY CLAY, laminated			5	2 2 3 3	0.66 B	34									
	685.1	Stiff, brown and gray SILTY CLAY			6	2 6 4	0.57 B	28									
	680.6	Boring terminated at 20.00 ft			7	2 2 4	0.82 B	31									
					8	2 3 6	1.80 B	17									
					9	3 6 9	NP	16									

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **09-01-2009** Complete Drilling **09-01-2009**
 Drilling Contractor **Wang Testing Services** Drill Rig **Mobile B-57 TMR**
 Driller **J&J** Logger **A. Kurnia** Checked by **E. Datz**
 Drilling Method **4.25-inch IDA HSA**

While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

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BORING LOG P-2

WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 697.21 ft
 North: 1857684.04 ft
 East: 995718.54 ft
 Station: 107+33.54
 Offset: 4.35 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	696.7	6-inch thick ASPHALT --PAVEMENT--															
		Medium dense, black and brown GRAVELLY SAND --FILL--			1	10 8 5 5	NP	4									
	693.5	Medium stiff to very stiff, brown and gray CLAY LOAM with gravel --FILL--			2	3 2 2 4	0.90 B	19									
					3	2 2 3 2	2.46 B	25									
	690.2	Black SILTY CLAY --BURIED TOPSOIL--			4	2 2 5 5	3.20 B	24									
	689.7	Very stiff to hard, brown and gray SILTY CLAY LOAM			5	2 3 6 8	6.97 B	14									
					6	4 6 8	3.61 B	17									
					7	4 8 10	5.82 B	15									
	681.7	Loose to medium dense, brown SILT with gravel			8	8 12 8	NP	19									
					9	2 4 2	NP	11									
	677.2	Boring terminated at 20.00 ft	20														

GENERAL NOTES

Begin Drilling **09-01-2009** Complete Drilling **09-01-2009**
 Drilling Contractor **Wang Testing Services** Drill Rig **Mobile B-57 TMR**
 Driller **J&J** Logger **A. Kurnia** Checked by **E. Datz**
 Drilling Method **4.25-inch IDA HSA**

WATER LEVEL DATA

While Drilling ∇ **16.00 ft**
 At Completion of Drilling ∇ **DRY**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

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BORING LOG P-3

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WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 693.14 ft
 North: 1858300.75 ft
 East: 995698.71 ft
 Station: 113+50.49
 Offset: 9.07 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	692.5	5-inch thick ASPHALT in two layers separated by 3-inches of gravel --PAVEMENT--				10											
	690.4	Medium dense, brown SANDY LOAM --FILL--			1	8 7 6	NP	11									
	688.4	Loose, gray SANDY GRAVEL with clay --FILL--			2	4 4 3	NP	11									
	688.4	Very soft to medium stiff, brown GRAVELLY SILTY LOAM --FILL--			3	2 2 3 3	< 0.25 P	17									
	682.6	Stiff, brown CLAY --FILL--			4	1 2 2 3	0.82 B	16									
	680.1	Loose, brown GRAVELLY SAND			5	3 2 2 4	0.33 B	17									
	680.1	Loose, brown GRAVELLY SAND			6	1 2 2	1.64 B	20									
	675.1	Medium dense, brown SILT with gravel			7	4 4 3	NP	18									
	673.1	Boring terminated at 20.00 ft			8	3 4 2	NP	13									
	673.1	Boring terminated at 20.00 ft			9	2 5 6	NP	14									

GENERAL NOTES

Begin Drilling **09-01-2009** Complete Drilling **09-01-2009**
 Drilling Contractor **Wang Testing Services** Drill Rig **Mobile B-57 TMR**
 Driller **J&J** Logger **A. Kurnia** Checked by **E. Datz**
 Drilling Method **4.25-inch IDA HSA**

WATER LEVEL DATA

While Drilling ∇ **16.00 ft**
 At Completion of Drilling ∇ **DRY**
 Time After Drilling **NA**
 Depth to Water ∇ **NA**

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BORING LOG P-4

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WEI Job No.: 790-63-01

Client **Transsystems Corporation**
 Project **Ohio Street over BNSF Rail Road, Phase 2**
 Location **Aurora, IL**

Datum: NAVD88
 Elevation: 695.69 ft
 North: 1858256.79 ft
 East: 995716.43 ft
 Station: 113+06.25
 Offset: 8.20 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	695.4	3-inch thick ASPHALT --PAVEMENT--															
	693.9	Brown GRAVELLY SAND --FILL--				5											
		Loose, brown SILTY LOAM --FILL--			1	5 5 8 5	NP	8									
					2	5 4 3	NP	9									
	690.9	Soft to stiff, brown GRAVELLY SILTY LOAM --FILL--	5			2 2 2 2	0.82 B	17									
					4	4 4 5 4	1.50 P	18									
			10		5	2 2 2 2	0.75 P	21									
					6	2 2 2	0.75 P	17									
			15		7	4 5 4	0.25 P	22									
	680.2	Medium dense, brown and gray GRAVELLY SAND			8	8 5 6	NP	13									
	677.7	Medium dense, brown and gray SILTY LOAM with gravel			9	4 5 6	NP	12									
	675.7	Boring terminated at 20.00 ft	20														

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling **09-01-2009** Complete Drilling **09-01-2009**
 Drilling Contractor **Wang Testing Services** Drill Rig **Mobile B-57 TMR**
 Driller **J&J** Logger **A. Kurnia** Checked by **E. Datz**
 Drilling Method **.425-inch IDA HSA**

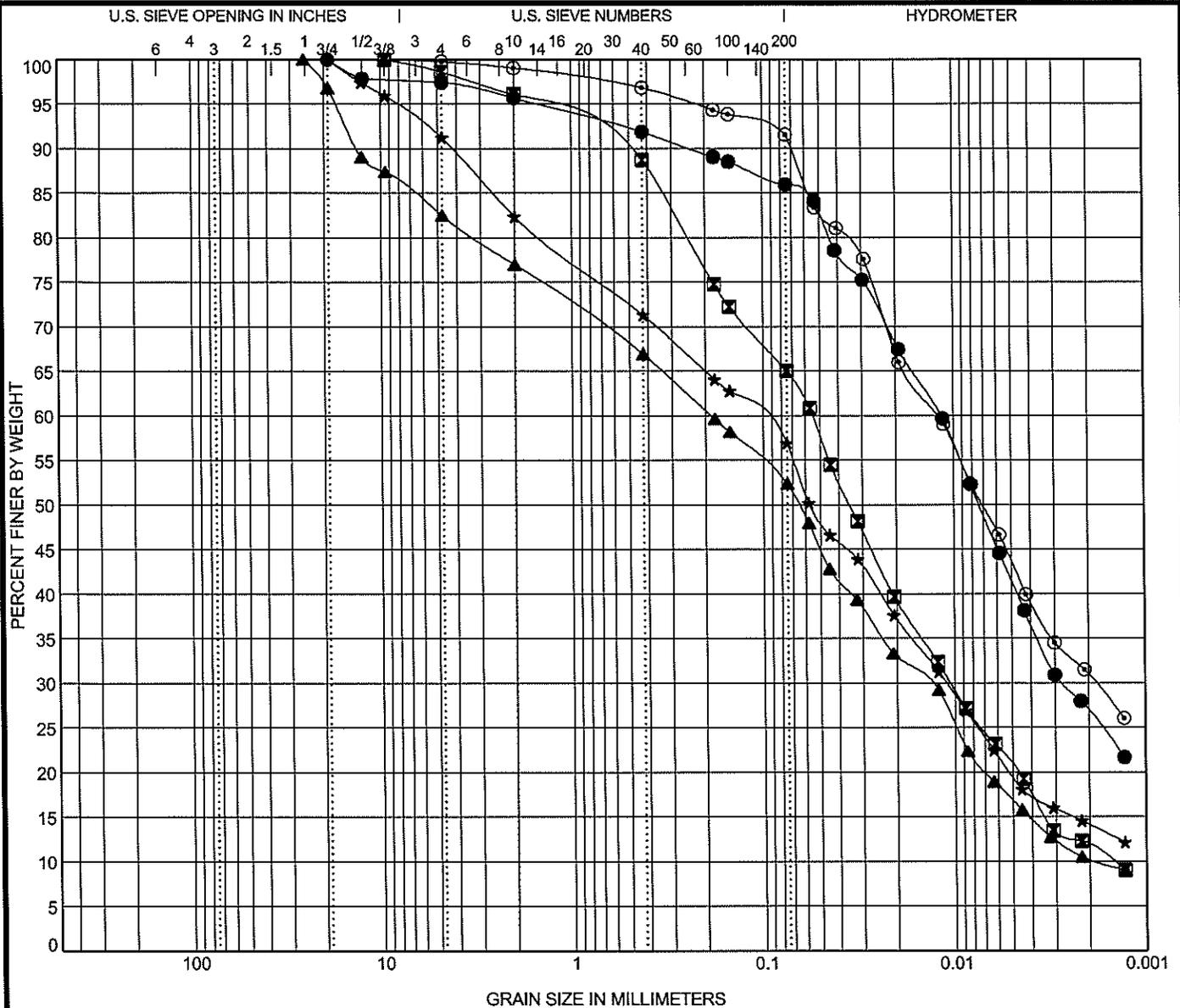
While Drilling **DRY**
 At Completion of Drilling **DRY**
 Time After Drilling **NA**
 Depth to Water **NA**

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WANGENGINC 7906301.GPJ WANGENG.GDT 4/8/13

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APPENDIX B



COBBLES	GRAVEL	SAND		SILT AND CLAY
		coarse	fine	

Specimen Identification	IDH Classification	LL	PL	PI	Cc	Cu
● B-1#4 8.5 ft	Silty Clay Loam	33	16	17		
■ B-2#2 3.5 ft	Silty Loam				1.34	36.01
▲ B-5#5 11.0 ft	Gravelly Silty Loam	26	15	11	0.53	102.56
★ B-5#7 16.0 ft	Gravelly Silty Loam	32	17	15		
◎ P-1#5 9.0 ft	Silty Clay	49	20	29		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-1#4 8.5 ft	19	0.012	0.003		4.3	9.8	59.1	26.8
■ B-2#2 3.5 ft	9.5	0.055	0.011	0.002	3.9	31.3	53.1	11.7
▲ B-5#5 11.0 ft	25.4	0.188	0.013	0.002	23.0	24.8	41.9	10.2
★ B-5#7 16.0 ft	19	0.108	0.011		17.6	25.8	42.5	14.1
◎ P-1#5 9.0 ft	9.5	0.012	0.002		0.9	7.8	60.3	31.0



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GRAIN SIZE DISTRIBUTION

Project: Ohio Street over BNSF Rail Road, Phase 2
 Location: Aurora, IL
 Number: 790-63-01

WEI GRAIN SIZE IDH 7906301.GPJ IUS LAB.GDT 4/8/13



Isotropically Consolidated-Undrained Triaxial Compression Test (AASHTO T 297-94/ASTM D 4767)

Project: TranSystems; Ohio Street over BNSF RR Sample ID: Boring B-5, ST#2, 14' to 16' Sample description: Brown SILTY LOAM Triaxial Cell No.: 1 Initial sample height: 2.75 in Initial sample diameter: 1.41 in Initial sample mass: 163.52 g Soil specific gravity: 2.72 (estimated) Dry sample mass: 144.40 g Final sample mass: 162.83 g Initial water content: 13.24% (specimen) Initial unit weight: 145.07 pcf Initial dry unit weight: 128.11 pcf Initial void ratio: 0.325 Initial saturation: 100.0% Final water content: 12.76% (specimen) Liquid Limit, %: % Plastic Limit, %: % % Sand: % % Silt: % % Clay: %	Tested by: M. Snider Prepared by: M. Snider Test date: May 19, 2010 WEI Job No.: 790-63-01 Tare mass: 13.25 g Measured sample mass w/out Tare: 163.52 g Tare and final sample mass: 176.08 g Tare and dry sample mass: 157.65 g Saturation (B) coefficient: 99% Rate of loading: 0.025 %/min Volume change during consolidation: 0.12 in ³ Void ratio after consolidation: 0.287 Dry unit weight after consolidation: 131.90 pcf Height after consolidation: 2.72 in Volume after consolidation: 4.17 in ³ Area after consolidation: 1.53 in ² Time at 50% Consolidation: 29.32 min Effective consolidation stress: 15.0 psi Shear modulus: 517.76 psi
--	---

Axial displacement (Δh)	Axial force (F)	Pore pressure (u)	Axial strain (εps)	Deviator stress (σ ₁ -σ ₃)	Total vertical stress (σ ₁)	Effective vertical stress (σ ₁)	Effective horizontal stress (σ ₃)	Shear stress (q, q')	Effective spherical stress (p')	Total spherical stress (p)	Effective Stress Ratio (σ ₁ /σ ₃)
in	pound	psi	%	psi	psi	psi	psi	psi	psi	psi	
0.00	0.00	0.00	0.00	0.00	15.00	15.00	15.00	0.00	15.00	15.00	1.00
0.00	4.91	0.58	0.10	3.20	18.20	17.62	14.42	1.60	16.02	16.60	1.22
0.01	9.52	1.63	0.20	6.21	21.21	19.58	13.37	3.10	16.47	18.10	1.46
0.01	12.25	2.64	0.30	7.98	22.98	20.33	12.36	3.99	16.34	18.99	1.65
0.01	14.83	3.64	0.40	9.65	24.65	21.01	11.36	4.82	16.19	19.82	1.85
0.01	17.23	4.53	0.50	11.20	26.20	21.66	10.47	5.60	16.07	20.60	2.07
0.02	18.94	5.19	0.60	12.29	27.29	22.10	9.81	6.15	15.96	21.15	2.25
0.02	20.51	5.69	0.70	13.30	28.30	22.61	9.31	6.65	15.96	21.65	2.43
0.02	21.91	6.07	0.80	14.19	29.19	23.12	8.93	7.10	16.02	22.10	2.59
0.02	22.99	6.49	0.90	14.88	29.88	23.39	8.51	7.44	15.95	22.44	2.75
0.03	24.17	6.68	1.00	15.63	30.63	23.95	8.32	7.81	16.13	22.81	2.88
0.04	28.41	7.16	1.50	18.27	33.27	26.12	7.84	9.14	16.98	24.14	3.33
0.06	31.93	7.04	2.00	20.43	35.43	28.39	7.96	10.22	18.17	25.22	3.57
0.07	35.04	6.84	2.50	22.31	37.31	30.47	8.16	11.15	19.32	26.15	3.73
0.08	37.64	6.44	3.00	23.84	38.84	32.40	8.56	11.92	20.48	26.92	3.79
0.10	40.26	6.03	3.50	25.37	40.37	34.34	8.97	12.69	21.65	27.69	3.83
0.11	42.71	5.66	4.00	26.78	41.78	36.12	9.34	13.39	22.73	28.39	3.87
0.12	44.96	5.17	4.50	28.04	43.04	37.87	9.83	14.02	23.85	29.02	3.85
0.14	47.15	4.62	5.00	29.25	44.25	39.63	10.38	14.63	25.01	29.63	3.82
0.15	49.46	4.18	5.50	30.52	45.52	41.34	10.82	15.26	26.08	30.26	3.82
0.17	51.49	3.75	6.00	31.61	46.61	42.85	11.25	15.80	27.05	30.80	3.81
0.18	53.32	3.28	6.50	32.56	47.56	44.27	11.72	16.28	27.99	31.28	3.78
0.19	54.83	2.94	7.00	33.30	48.30	45.36	12.06	16.65	28.71	31.65	3.76
0.21	56.82	2.53	7.50	34.20	49.20	46.67	12.47	17.10	29.57	32.10	3.74
0.22	58.28	2.15	8.00	35.01	50.01	47.86	12.85	17.51	30.35	32.51	3.73
0.23	60.09	1.70	8.50	35.91	50.91	49.20	13.30	17.95	31.25	32.95	3.70
0.25	61.68	1.38	9.00	36.66	51.66	50.27	13.62	18.33	31.95	33.33	3.69
0.26	63.19	1.09	9.50	37.34	52.34	51.25	13.91	18.67	32.58	33.67	3.69
0.27	64.85	0.59	10.00	38.11	53.11	52.53	14.41	19.06	33.47	34.06	3.64
0.30	68.29	0.03	11.00	39.69	54.69	54.66	14.97	19.85	34.81	34.85	3.65
0.33	71.45	-0.48	12.00	41.06	56.06	56.54	15.48	20.53	36.01	35.53	3.65
0.36	74.73	-0.97	13.00	42.46	57.46	58.43	15.97	21.23	37.20	36.23	3.66
0.39	77.33	-1.37	14.00	43.43	58.43	59.80	16.37	21.71	38.08	36.71	3.65
0.41	79.60	-1.99	15.00	44.18	59.18	61.17	16.99	22.09	39.08	37.09	3.60

Notes:

$p = \frac{\sigma_1 + \sigma_3}{2}$ $q = \sigma_1 - \sigma_3$
 $p' = \frac{\sigma_1' + \sigma_3'}{2}$ $q' = \sigma_1' - \sigma_3'/2$
 Wet Method Saturation

Prepared by: _____ Date: _____

Checked by: _____ Date: _____



Isotropically Consolidated-Undrained Triaxial Compression Test (AASHTO T 297-94/ASTM D 4767)

Project: TranSystems; Ohio Street over BNSF RR	Tested by: M. Snider
Sample ID: Boring B-5, ST#2, 14' to 16'	Prepared by: M. Snider
Sample description: Brown SILTY LOAM	Test date: May 19, 2010
Triaxial Cell No.: 2	WEI Job No.: 790-63-01
Initial sample height: 2.70 in	Tare mass: 13.10 g
Initial sample diameter: 1.42 in	Measured sample mass w/out Tare: 158.65 g
Initial sample mass: 158.65 g	Tare and final sample mass: 171.09 g
Soil specific gravity: 2.75 (estimated)	Tare and dry sample mass: 150.24 g
Dry sample mass: 137.14 g	
Final sample mass: 157.99 g	Saturation (B) coefficient: 99%
Initial water content: 15.68% (specimen)	Rate of loading: 0.025 %/min
Initial unit weight: 141.91 pcf	Volume change during consolidation: 0.17 in ³
Initial dry unit weight: 122.67 pcf	Void ratio after consolidation: 0.344
Initial void ratio: 0.399	Dry unit weight after consolidation: 127.68 pcf
Initial saturation: 100.0%	Height after consolidation: 2.67 in
Final water content: 15.20% (specimen)	Volume after consolidation: 4.09 in ³
Liquid Limit, %: %	Area after consolidation: 1.53 in ²
Plastic Limit, %: %	Time at 50% Consolidation: 20.80 min
% Sand: %	
% Silt: %	Effective consolidation stress: 30.0 psi
% Clay: %	Shear modulus: 1041.78 psi

Axial displacement (Δh)	Axial force (F)	Pore pressure (u)	Axial strain (εps)	Deviator stress (σ ₁ -σ ₃)	Total vertical stress (σ ₁)	Effective vertical stress (σ ₁)	Effective horizontal stress (σ ₃)	Shear stress (q, q')	Effective spherical stress (p')	Total spherical stress (p)	Effective Stress Ratio (σ ₁ /σ ₃)
in	pound	psi	%	psi	psi	psi	psi	psi	psi	psi	
0.00	0.00	0.00	0.00	0.00	30.00	30.00	30.00	0.00	30.00	30.00	1.00
0.00	11.82	2.68	0.10	7.69	37.69	35.01	27.32	3.85	31.17	33.85	1.28
0.01	19.06	6.23	0.20	12.40	42.40	36.17	23.77	6.20	29.97	36.20	1.52
0.01	23.41	9.08	0.30	15.21	45.21	36.13	20.92	7.60	28.52	37.60	1.73
0.01	26.53	11.31	0.40	17.22	47.22	35.91	18.69	8.61	27.30	38.61	1.92
0.01	28.82	13.03	0.50	18.69	48.69	35.65	16.97	9.34	26.31	39.34	2.10
0.02	30.72	14.50	0.60	19.90	49.90	35.41	15.50	9.95	25.45	39.95	2.28
0.02	32.27	15.52	0.70	20.88	50.88	35.36	14.48	10.44	24.92	40.44	2.44
0.02	33.56	16.50	0.80	21.70	51.70	35.19	13.50	10.85	24.34	40.85	2.61
0.02	34.87	17.26	0.90	22.52	52.52	35.26	12.74	11.26	24.00	41.26	2.77
0.03	35.98	17.86	1.00	23.21	53.21	35.35	12.14	11.61	23.74	41.61	2.91
0.04	40.32	19.72	1.50	25.88	55.88	36.16	10.28	12.94	23.22	42.94	3.52
0.05	43.87	20.50	2.00	28.02	58.02	37.52	9.50	14.01	23.51	44.01	3.95
0.07	46.98	20.71	2.50	29.85	59.85	39.14	9.29	14.93	24.21	44.93	4.21
0.08	50.02	20.76	3.00	31.62	61.62	40.87	9.24	15.81	25.05	45.81	4.42
0.09	52.78	20.62	3.50	33.20	63.20	42.58	9.38	16.60	25.98	46.60	4.54
0.11	55.47	20.55	4.00	34.70	64.70	44.16	9.45	17.35	26.80	47.35	4.67
0.12	58.07	20.08	4.50	36.14	66.14	46.06	9.92	18.07	27.99	48.07	4.64
0.14	60.40	19.78	5.00	37.39	67.39	47.62	10.22	18.70	28.92	48.70	4.66
0.15	62.73	19.28	5.50	38.64	68.64	49.35	10.72	19.32	30.03	49.32	4.61
0.16	65.47	18.86	6.00	40.10	70.10	51.24	11.14	20.05	31.19	50.05	4.60
0.18	68.00	18.42	6.50	41.44	71.44	53.02	11.58	20.72	32.30	50.72	4.58
0.19	70.67	17.97	7.00	42.83	72.83	54.86	12.03	21.42	33.44	51.42	4.56
0.20	72.95	17.57	7.50	43.97	73.97	56.40	12.43	21.99	34.41	51.99	4.54
0.22	75.46	17.08	8.00	45.24	75.24	58.17	12.92	22.62	35.54	52.62	4.50
0.23	77.74	16.66	8.50	46.36	76.36	59.70	13.34	23.18	36.52	53.18	4.47
0.24	80.19	16.23	9.00	47.56	77.56	61.32	13.77	23.78	37.54	53.78	4.45
0.26	82.53	15.85	9.50	48.67	78.67	62.83	14.15	24.34	38.49	54.34	4.44
0.27	84.65	15.49	10.00	49.65	79.65	64.17	14.51	24.83	39.34	54.83	4.42
0.30	88.52	14.65	11.00	51.34	81.34	66.70	15.35	25.67	41.02	55.67	4.34
0.32	90.91	13.94	12.00	52.13	82.13	68.19	16.06	26.07	42.12	56.07	4.25
0.35	94.48	13.36	13.00	53.57	83.57	70.21	16.65	26.78	43.43	56.78	4.22
0.38	98.43	12.69	14.00	55.17	85.17	72.48	17.31	27.58	44.90	57.58	4.19
0.41	102.13	12.19	15.00	56.57	86.57	74.38	17.81	28.29	46.09	58.29	4.18

Notes:

$p = \sigma_1 + \sigma_3 / 2$ $q = \sigma_1 - \sigma_3 / 2$

$p' = \sigma_1' + \sigma_3' / 2$ $q' = \sigma_1' - \sigma_3' / 2$

Wet Method Saturation

Prepared by: _____ Date: _____

Checked by: _____ Date: _____



Isotropically Consolidated-Undrained Triaxial Compression Test (AASHTO T 297-94/ASTM D 4767)

Project: TranSystems; Ohio Street over BNSF RR	Tested by: M. Snider
Sample ID: Boring B-5, ST#2, 14' to 16'	Prepared by: M. Snider
Sample description: Brown SILTY LOAM	Test date: May 19, 2010
Triaxial Cell No.: 3	WEI Job No.: 790-63-01
Initial sample height: 2.69 in	Tare mass: 13.38 g
Initial sample diameter: 1.44 in	Measured sample mass w/out Tare: 159.27 g
Initial sample mass: 159.27 g	Tare and final sample mass: 171.93 g
Soil specific gravity: 2.75 (estimated)	Tare and dry sample mass: 150.53 g
Dry sample mass: 137.15 g	
Final sample mass: 158.55 g	Saturation (B) coefficient: 99%
Initial water content: 16.13% (specimen)	Rate of loading: 0.025 %/min
Initial unit weight: 139.18 pcf	Volume change during consolidation: 0.10 in ³
Initial dry unit weight: 119.85 pcf	Void ratio after consolidation: 0.398
Initial void ratio: 0.432	Dry unit weight after consolidation: 122.79 pcf
Initial saturation: 100.0%	Height after consolidation: 2.67 in
Final water content: 15.60% (specimen)	Volume after consolidation: 4.26 in ³
Liquid Limit, %: %	Area after consolidation: 1.60 in ²
Plastic Limit, %: %	Time at 50% Consolidation: N/A min
% Sand: %	
% Silt: %	Effective consolidation stress: 45.0 psi
% Clay: %	Shear modulus: 1259.82 psi

Axial displacement (Δh)	Axial force (F)	Pore pressure (u)	Axial strain (εps)	Deviator stress (σ ₁ -σ ₃)	Total vertical stress (σ ₁)	Effective vertical stress (σ ₁ ')	Effective horizontal stress (σ ₃ ')	Shear stress (q, q')	Effective spherical stress (p')	Total spherical stress (p)	Effective Stress Ratio (σ ₁ '/σ ₃ ')
in	pound	psi	%	psi	psi	psi	psi	psi	psi	psi	
0.00	0.00	0.00	0.00	0.00	45.00	45.00	45.00	0.00	45.00	45.00	1.00
0.00	9.10	1.20	0.10	5.70	50.70	49.50	43.80	2.85	46.65	47.85	1.13
0.01	23.37	4.85	0.20	14.62	59.62	54.76	40.15	7.31	47.46	52.31	1.36
0.01	33.12	9.36	0.30	20.69	65.69	56.33	35.64	10.35	45.99	55.35	1.58
0.01	39.17	12.98	0.40	24.45	69.45	56.47	32.02	12.23	44.24	57.23	1.76
0.01	44.13	16.31	0.50	27.52	72.52	56.21	28.69	13.76	42.45	58.76	1.96
0.02	47.23	18.81	0.60	29.42	74.42	55.61	26.19	14.71	40.90	59.71	2.12
0.02	49.74	20.77	0.70	30.95	75.95	55.18	24.23	15.48	39.70	60.48	2.28
0.02	51.69	22.46	0.80	32.13	77.13	54.68	22.54	16.07	38.61	61.07	2.43
0.02	53.52	23.78	0.90	33.24	78.24	54.46	21.22	16.62	37.84	61.62	2.57
0.03	54.98	24.93	1.00	34.11	79.11	54.18	20.07	17.06	37.13	62.06	2.70
0.04	61.11	28.10	1.50	37.72	82.72	54.62	16.90	18.86	35.76	63.86	3.23
0.05	66.10	29.64	2.00	40.59	85.59	55.95	15.36	20.30	35.66	65.30	3.64
0.07	70.82	29.88	2.50	43.27	88.27	58.39	15.12	21.63	36.76	66.63	3.86
0.08	75.10	30.02	3.00	45.65	90.65	60.63	14.98	22.83	37.81	67.83	4.05
0.09	79.11	29.74	3.50	47.84	92.84	63.10	15.26	23.92	39.18	68.92	4.14
0.11	82.86	29.44	4.00	49.85	94.85	65.41	15.56	24.93	40.49	69.93	4.20
0.12	86.70	29.01	4.50	51.89	96.89	67.88	15.99	25.94	41.94	70.94	4.24
0.13	90.54	28.47	5.00	53.90	98.90	70.43	16.53	26.95	43.48	71.95	4.26
0.15	93.93	27.93	5.50	55.62	100.62	72.69	17.07	27.81	44.88	72.81	4.26
0.16	97.35	27.24	6.00	57.35	102.35	75.10	17.76	28.67	46.43	73.67	4.23
0.17	100.76	26.80	6.50	59.04	104.04	77.24	18.20	29.52	47.72	74.52	4.24
0.19	103.77	26.16	7.00	60.47	105.47	79.32	18.84	30.24	49.08	75.24	4.21
0.20	106.78	25.47	7.50	61.90	106.90	81.43	19.53	30.95	50.48	75.95	4.17
0.22	110.70	25.00	8.00	63.82	108.82	83.83	20.01	31.91	51.92	76.91	4.19
0.23	114.04	24.40	8.50	65.39	110.39	85.99	20.60	32.69	53.30	77.69	4.17
0.24	117.26	23.96	9.00	66.87	111.87	87.90	21.04	33.43	54.47	78.43	4.18
0.26	120.30	23.44	9.50	68.23	113.23	89.78	21.56	34.11	55.67	79.11	4.16
0.27	122.62	23.00	10.00	69.16	114.16	91.15	22.00	34.58	56.57	79.58	4.14
0.30	127.87	22.02	11.00	71.32	116.32	94.30	22.98	35.66	58.64	80.66	4.10
0.32	133.48	21.16	12.00	73.61	118.61	97.45	23.84	36.81	60.65	81.81	4.09
0.35	137.44	20.29	13.00	74.93	119.93	99.64	24.71	37.47	62.17	82.47	4.03
0.38	140.66	19.71	14.00	75.81	120.81	101.10	25.29	37.90	63.19	82.90	4.00
0.40	144.08	19.04	15.00	76.75	121.75	102.71	25.96	38.37	64.33	83.37	3.96

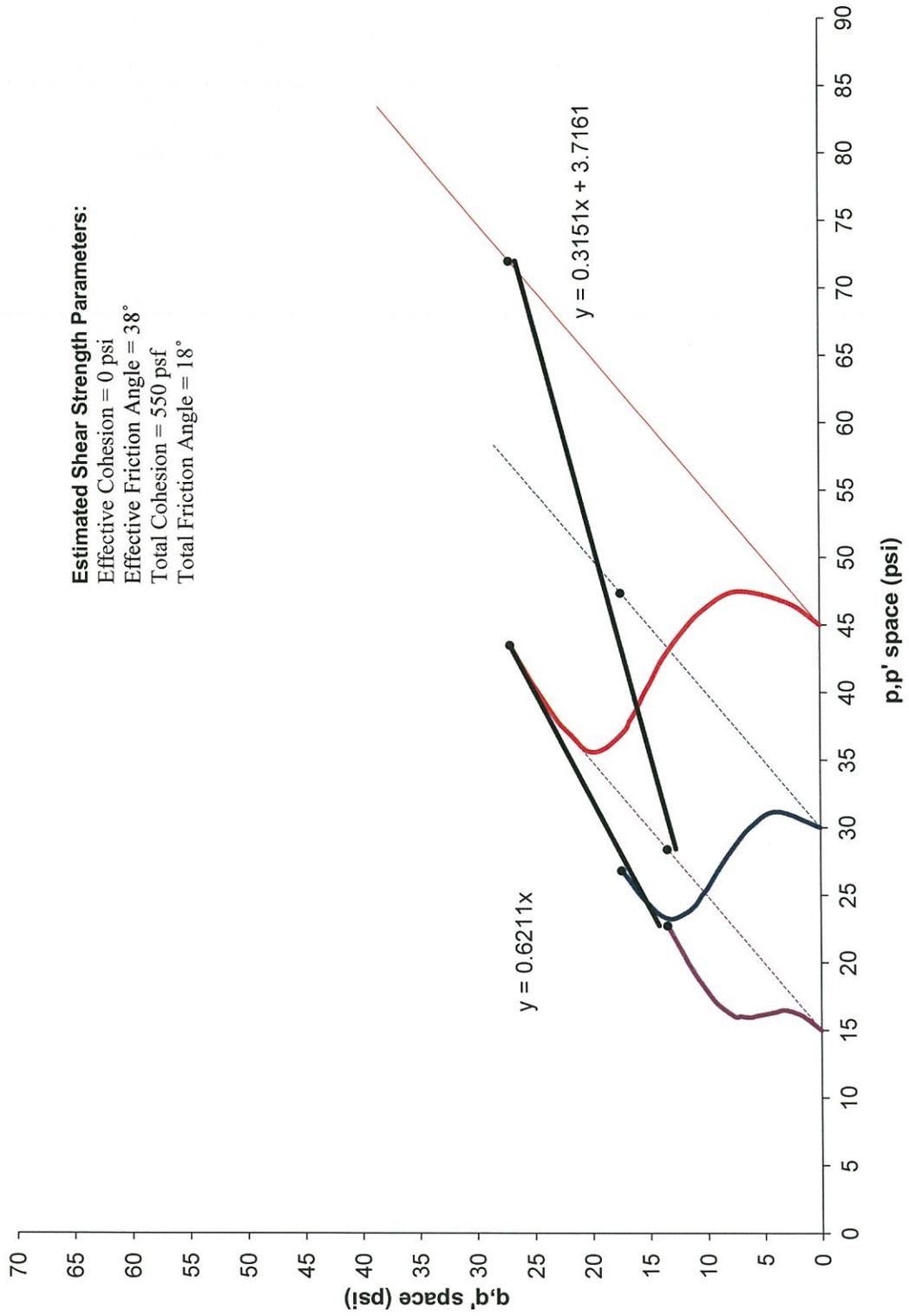
Notes:

$p = \sigma_1 + \sigma_3 / 2$ $q = \sigma_1 - \sigma_3 / 2$
 $p' = \sigma_1' + \sigma_3' / 2$ $q' = \sigma_1' - \sigma_3' / 2$
 Wet Method Saturation

Prepared by: _____ Date: _____

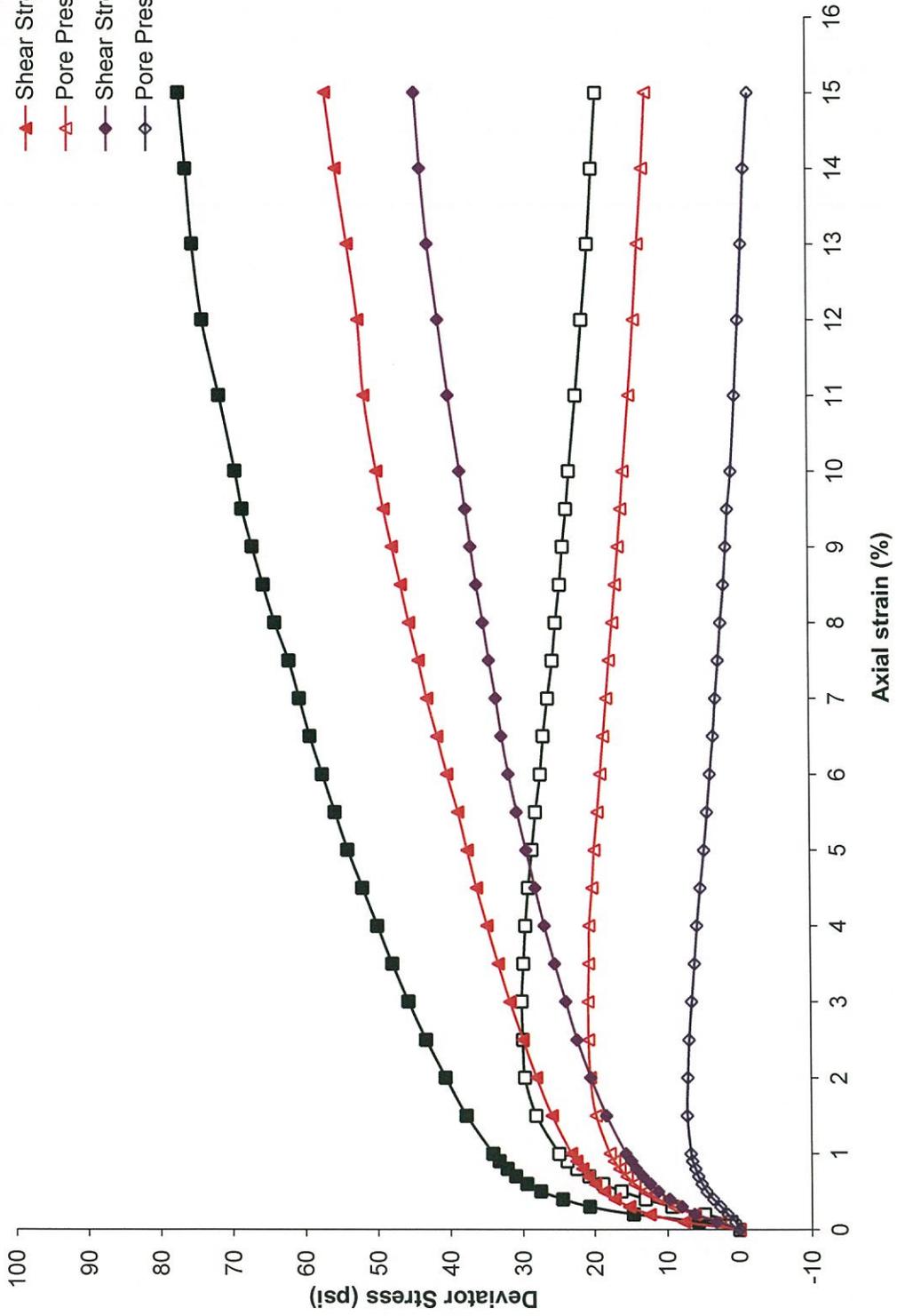
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Total and Effective Stress Paths at Failure (p-q Space) Sample B-5, ST#2, 14' to 16'



**Sample B-5, ST#2, 14' to 16': Stress v. Strain and Pore Pressure v. Strain Curves
All Confining Pressures**

- Shear stress, 45.0 psi
- Pore Pressure, 45.0 psi
- ▲ Shear Stress, 30.0 psi
- △ Pore Pressure, 30.0 psi
- ◆ Shear Stress, 15.0 psi
- ◇ Pore Pressure, 15.0 psi



APPENDIX C



Run #1

TOP

BOTTOM

Run #2

TOP

BOTTOM

BORING B-2:

Bedrock Core #1, 45' to 50'; 98% Recovery, RQD = 39%

Bedrock Core #2, 50' to 55'; 38% Recovery, RQD = 6%

BEDROCK CORE: OHIO STREET OVER THE BNSF AND INDIAN CREEK; SN 045-9942; SEC 08-00278-00-BR; KANE COUNTY

SCALE: GRAPHIC

APPENDIX C-1

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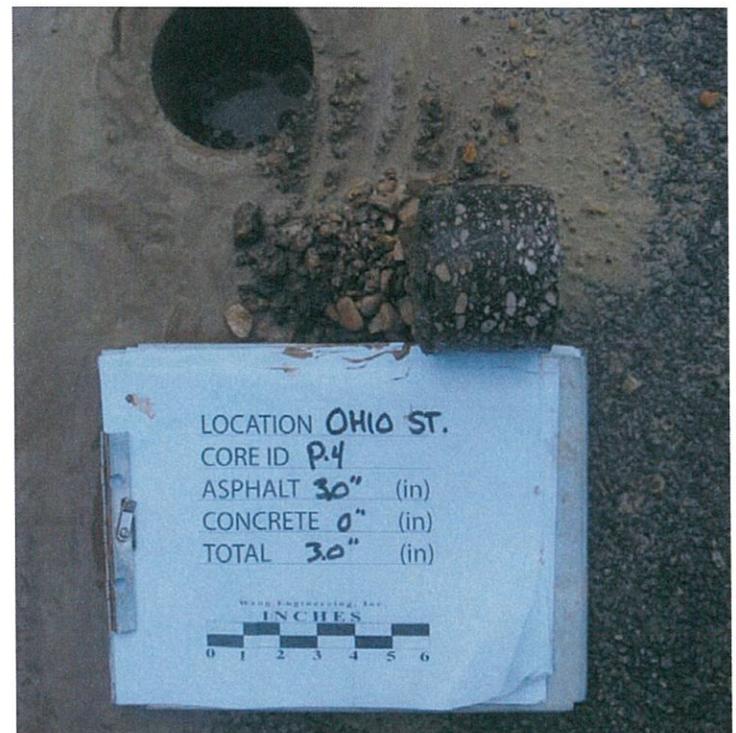
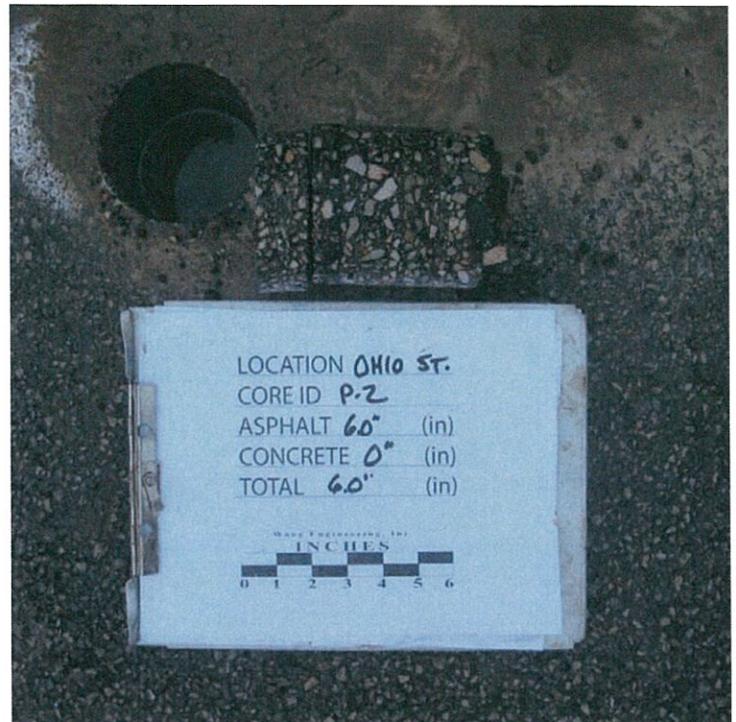
Run #1

TOP

BOTTOM

BORING B-4:
 Bedrock Core #1, 55' to 65'; 100% Recovery, RQD = 58%

BEDROCK CORE: OHIO STREET OVER THE BNSF AND INDIAN CREEK; SN 045-9942; SEC 08-00278-00-BR; KANE COUNTY	
SCALE: GRAPHIC	APPENDIX C-2
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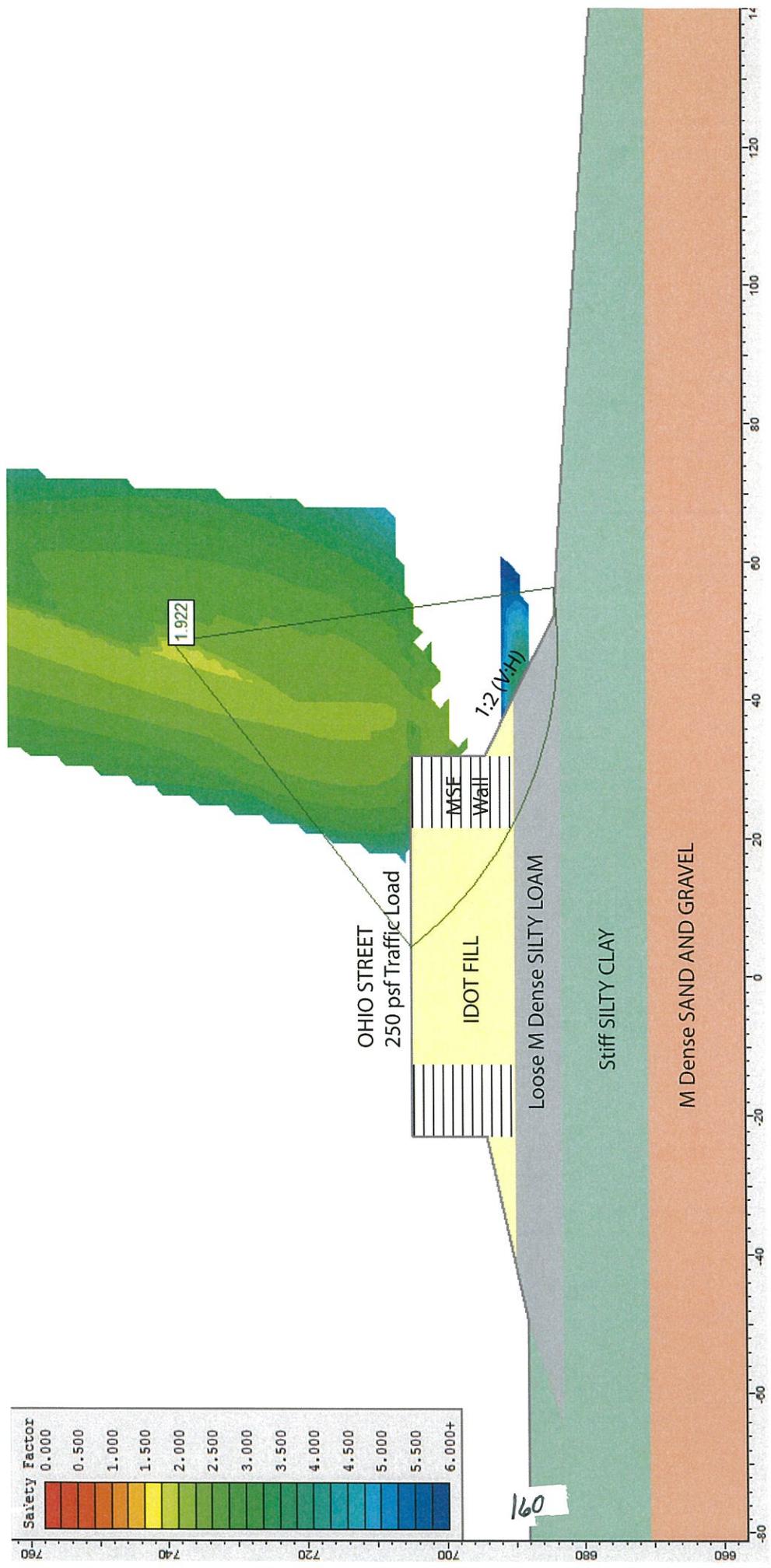
PAVEMENT CORES: OHIO STREET OVER THE BNSF AND INDIAN CREEK; SN 045-9942; SEC 08-00278-00-BR; KANE COUNTY

SCALE: GRAPHIC	APPENDIX C-3	DRAWN BY: END CHECKED BY: MLS
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APPENDIX D



Undrained (Short Term) Analysis: North Embankment MSE Wall System Station 112+50

Layer ID	Description	Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	IDOT FILL	125	1000	0
2	Loose to M Dense SILTY LOAM	120	0	35
3	Stiff SILTY CLAY	120	1200	0
4	M Dense SAND and GRAVEL	125	0	34

GLOBAL STABILITY ANALYSIS: OHIO STREET OVER THE BNSF AND INDIAN CREEK, SN 045-9942, SEC 08-00278-00-BR, KANE COUNTY

SCALE: GRAPHICAL

APPENDIX D-1

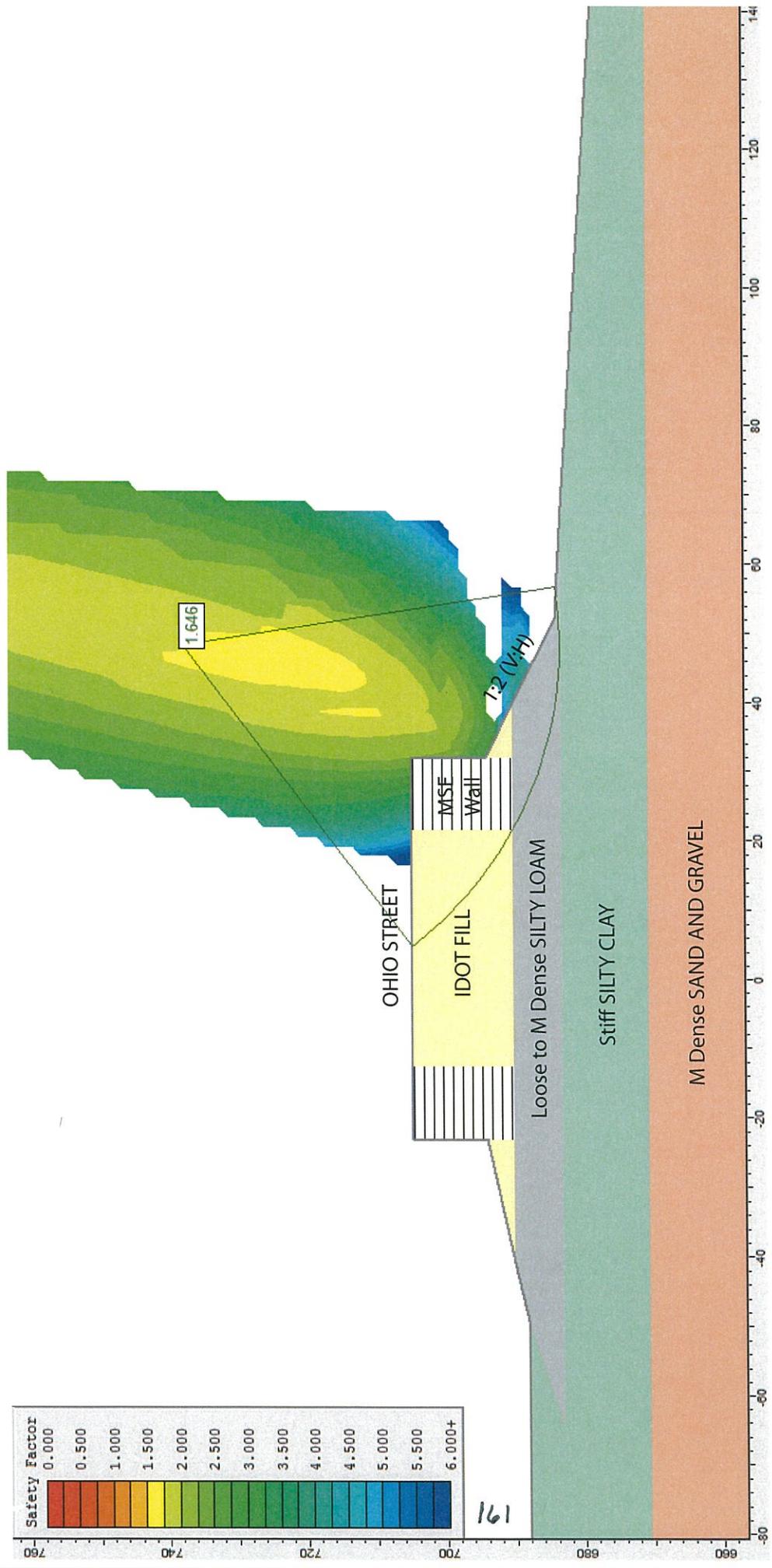
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Drained (Long Term) Analysis: North Embankment MSE Wall System Station 112+50

Layer ID	Description	Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	IDOT FILL	125	100	30
2	Loose to M Dense SILTY LOAM	120	0	35
3	Stiff SILTY CLAY	120	100	30
4	M Dense SAND and GRAVEL	125	0	34

GLOBAL STABILITY ANALYSIS: OHIO STREET OVER THE BNSF AND INDIAN CREEK, SN 045-9942, SEC 08-00278-00-BR, KANE COUNTY

SCALE: GRAPHICAL

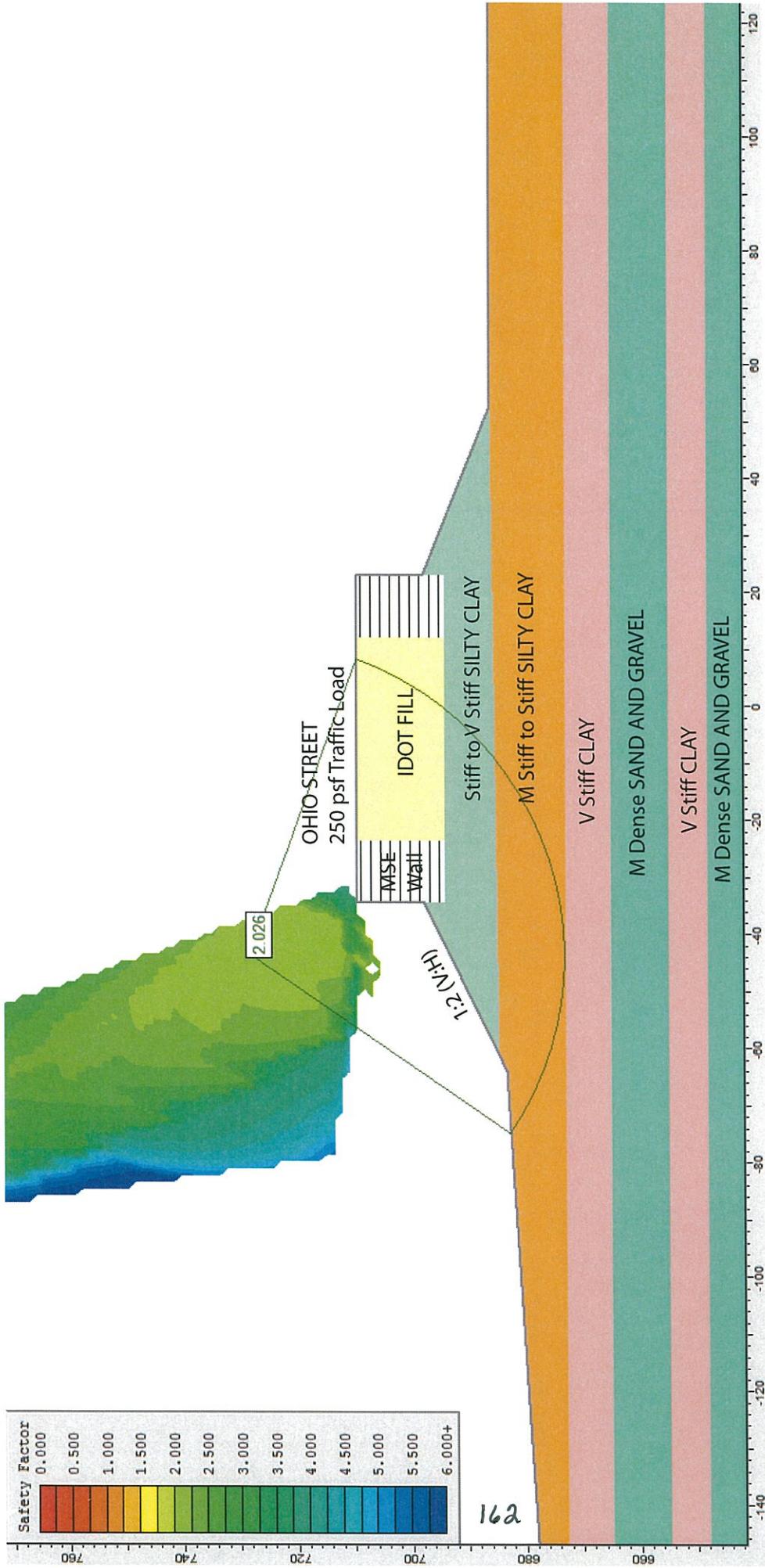
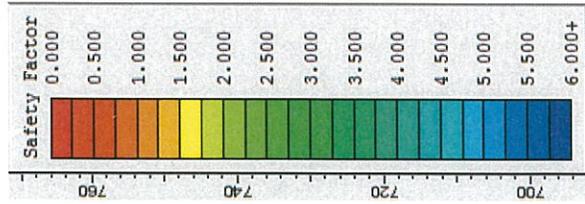
APPENDIX D-2

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Undrained (Short Term) Analysis: South Embankment MSE Wall System Station 109+00

Layer ID	Description	Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	IDOT FILL	125	1000	0
2	Stiff to V Stif SILTY CLAY	120	3000	0
3	M Stiff to Stiff SILTY CLAY	120	1000	0
4	V Stiff CLAY	120	3500	0
5	M Dense SAND and GRAVEL	125	0	34

GLOBAL STABILITY ANALYSIS: OHIO STREET OVER THE BNSF AND INDIAN CREEK, SN 045-9942; SEC 08-00278-00-BR, KANE COUNTY

SCALE: GRAPHICAL

APPENDIX D-3

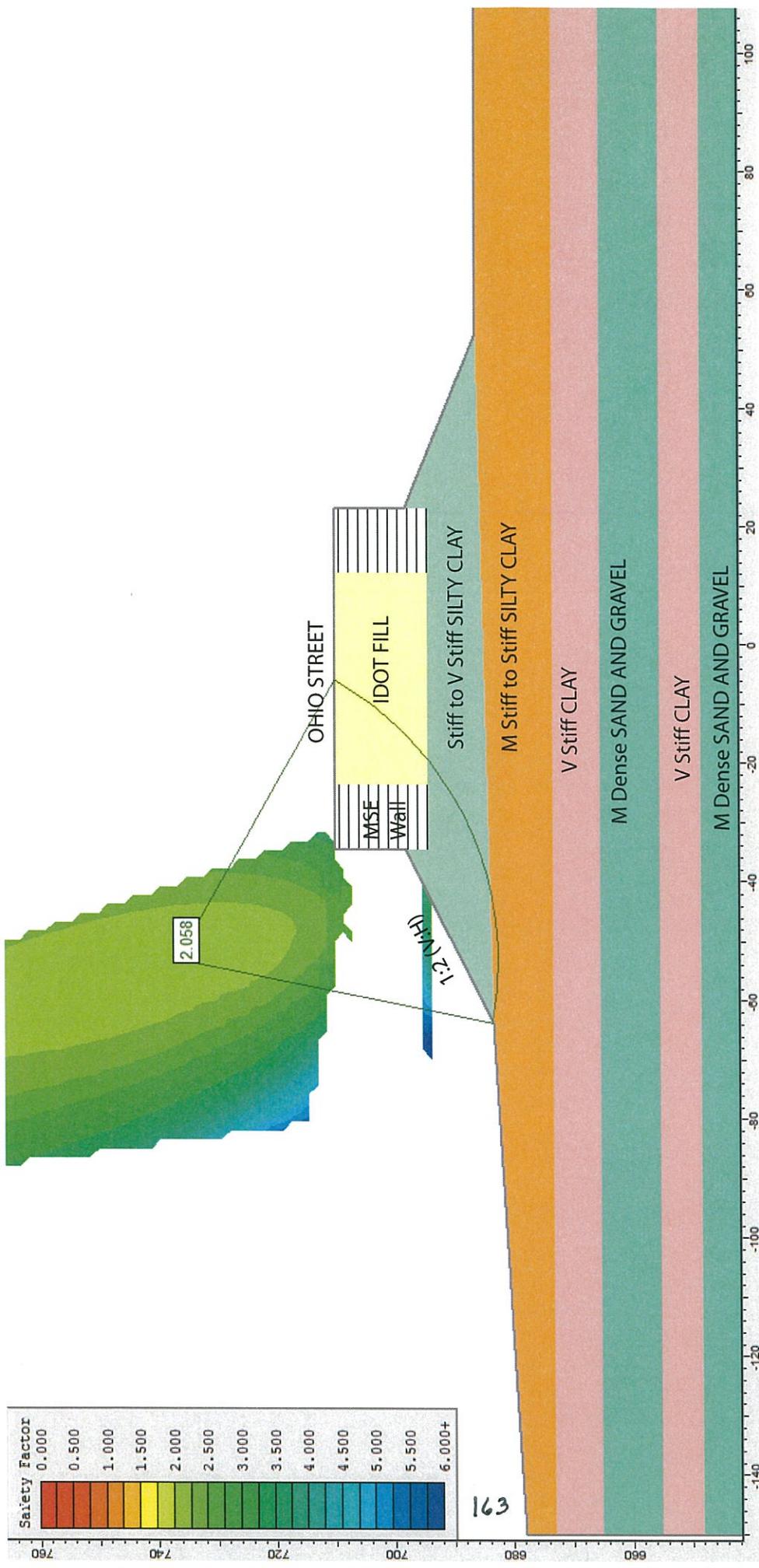
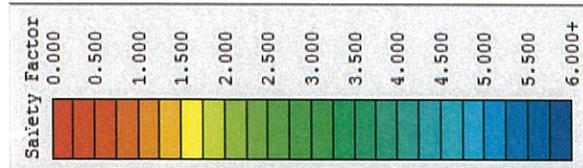
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Drained (Long Term) Analysis: South Embankment MSE Wall System Station 109+00

Layer ID	Description	Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	IDOT FILL	125	100	30
2	Stiff to V Stiff SILTY CLAY	120	100	30
3	M Stiff to Stiff SILTY CLAY	120	100	30
4	V Stiff CLAY	120	100	30
5	M Dense SAND and GRAVEL	125	0	34

GLOBAL STABILITY ANALYSIS: OHIO STREET OVER THE BNSF AND INDIAN CREEK, SN 045-9942, SEC 08-00278-00-BR, KANE COUNTY

SCALE: GRAPHICAL

APPENDIX D-4

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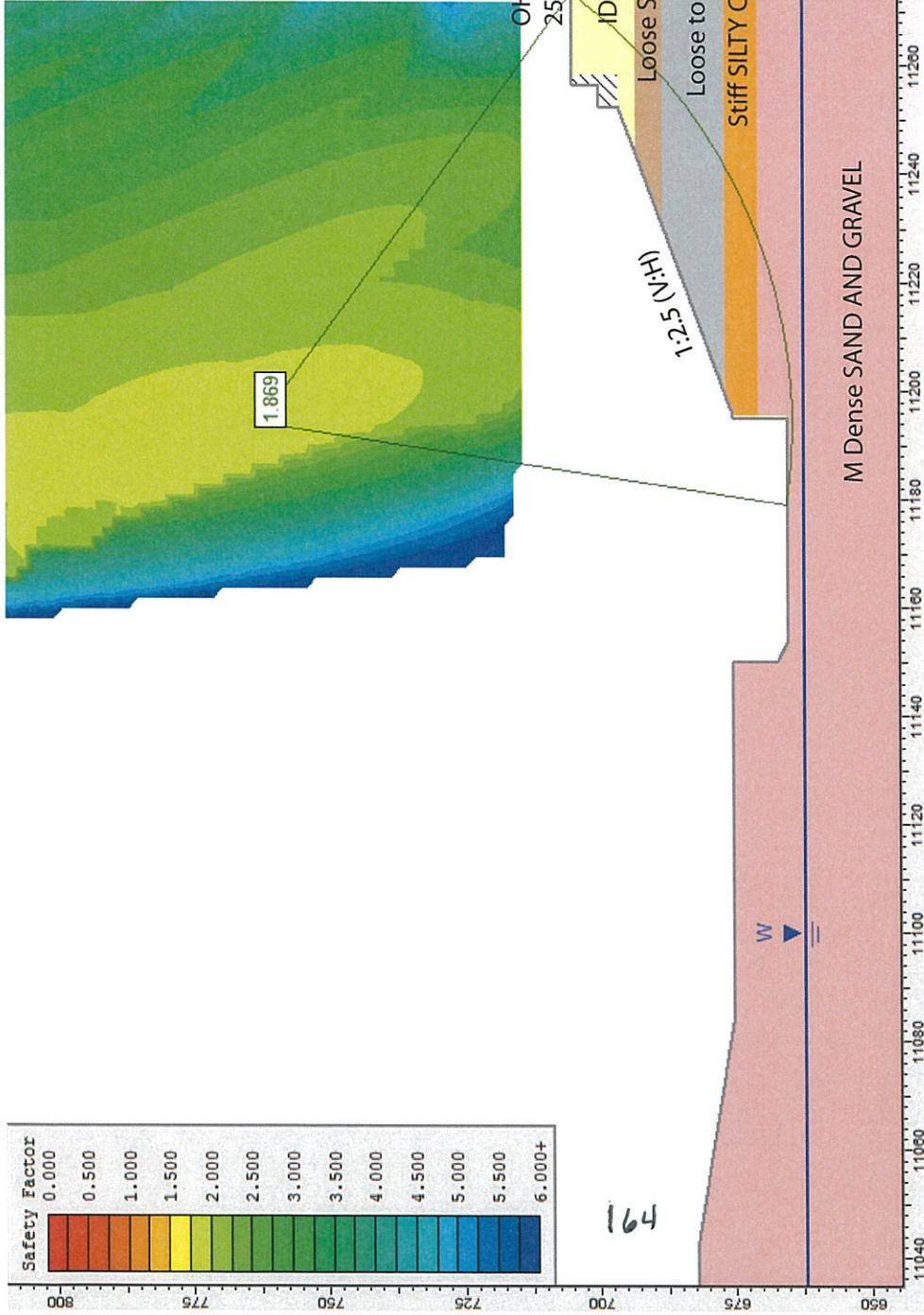
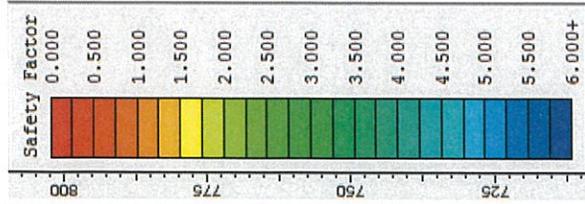
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Undrained (Short Term) Analysis: North Embankment End Slope

Layer ID	Description	Unit Weight (pcf)	Undrained Cohesion (psf)	Undrained Friction Angle (degrees)
1	IDOT FILL	125	1000	0
2	Loose SANDY LOAM	120	0	30
3	Loose to M Dense SILTY LOAM	120	0	35
4	Stiff SILTY CLAY	120	1200	0
5	M Dense SAND and GRAVEL	125	0	34

GLOBAL STABILITY ANALYSIS: OHIO STREET OVER THE BNSF AND INDIAN CREEK, SN 045-9942, SEC 08-00278-00-BR, KANE COUNTY

SCALE: GRAPHICAL

APPENDIX D-5

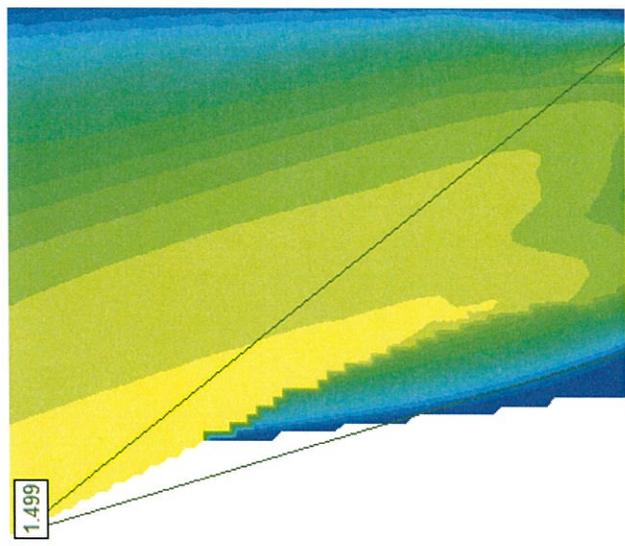
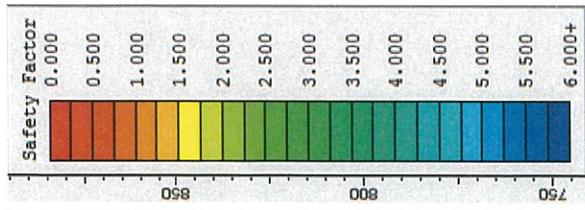
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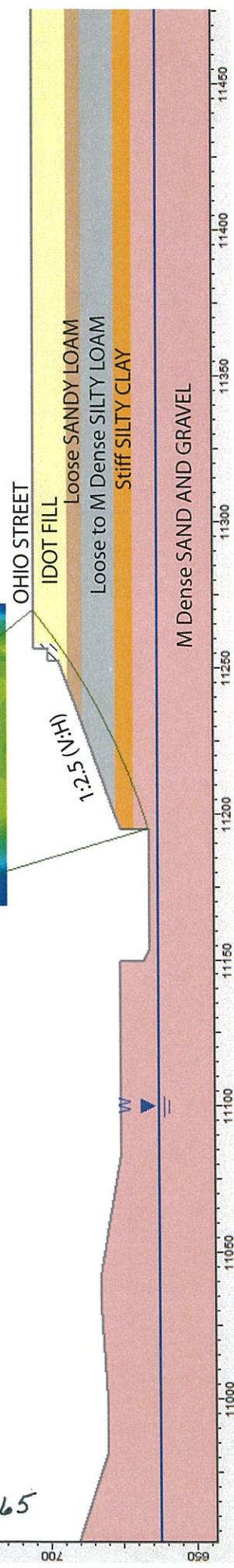
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790-63-01



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Drained (Long Term) Analysis: North Embankment End Slope

Layer ID	Description	Unit Weight (pcf)	Drained Cohesion (psf)	Drained Friction Angle (degrees)
1	IDOT FILL	125	100	30
2	Loose SANDY LOAM	120	0	30
3	Loose to M Dense SILTY LOAM	120	0	35
4	Stiff SILTY CLAY	120	100	30
5	M Dense SAND and GRAVEL	125	0	34

GLOBAL STABILITY ANALYSIS: OHIO STREET OVER THE BNSF AND INDIAN CREEK, SN 045-9942, SEC 08-00278-00-BR, KANE COUNTY

SCALE: GRAPHICAL

APPENDIX D-6

DRAWN BY: MLS
CHECKED BY: LMI

1145 N. Main Street
Lombard, IL 60148
www.wangeng.com

Wang Engineering

FOR TRANSSYSTEMS CORPORATION

790-63-01

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue, East; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

RECEIVED

JUL 23 2014

SUBJECT: AURORA (Kane County-0894070)

Permit Issued to:
Mayor and City Council
44 East Downer Place
Aurora, IL 60507-2067



PERMIT NUMBER: 1192-FY2014

DATE ISSUED: July 17, 2014

PERMIT TYPE: Water Main

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated, and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the "Environmental Protection Act", Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM: Tran Systems

NUMBER OF PLAN SHEETS: 136

TITLE OF PLANS: "Ohio St.-Indian Ave to Rural Street 7 Over The BSNF Railroad & Indian Creek"

PROPOSED IMPROVEMENTS:

Install approximately 476 lineal feet of 16-inch diameter and 166 lineal feet of 12-inch diameter water main

ADDITIONAL CONDITIONS:

1. There are no further conditions to this permit.

DCC:CLK: dsa

cc: Tran Systems
Elgin Region

A handwritten signature in black ink, appearing to read "D. Cook".

David C. Cook, P.E.

Acting Manager Permit Section

Division of Public Water Supplies

KANE COUNTY STORMWATER MANAGEMENT PERMIT APPLICATION

Date Application Received:	Date Permit Issued:
----------------------------	---------------------

Name & Address of Applicant:	Name & Address of Owner(s):	Name & Address of Developer:
Eric Neubauer, PE	Richard Munson, PE	(Same as Owner)
TransSystems	City of Aurora	
222 S Riverside Plaza Suite 610	44 E Downer Place	
Chicago, IL 60606	Aurora, IL 60507	
Title:		
Telephone no. during business hours:	Telephone no. during business hours	
A/C(312) 699 - 5834	A/C(630) 256 - 3256	

Indicate which Submittals apply to application* (see flowchart):

- ? Stormwater Submittal x
 - ? Flood Plain Submittal x
 - ? Wetland Submittal x
 - ? No special management areas encroach the development
- *Must be identified by qualified review specialist

Names, addresses and telephone numbers of all adjoining property owners within 250 feet of the development (use additional sheets if necessary):

BNSF Railroad 80 44th Ave NE Minneapolis, MN 55421 (763) 782-3015
--

Common Address of Development:	Legal Description (attach):
Ohio Street - Indian Ave to Rural St	NE & NW 1/4 SEC 23, SE & SW 1/4 SEC 14, T38N, R8E
Street address	1/4, Section, Township, Range
City of Aurora	
Community	
City of Aurora	
Name of local governing authority	P.L.N.
Indian Creek, Fox River Tributary	
Watershed planning area and tributary	

Is any portion of this project now complete? _____ Yes No, If "yes," explain in description portion.

I hereby certify that all information presented in this application is true and accurate to the best of my knowledge. I have read and understand the Kane County Stormwater Management Ordinance, and fully intend to comply with those provisions.

Eric Neubauer
Signature of Developer Applicant

4/17/2014
Date

I have read and understand the Kane County Stormwater Management Ordinance, and fully intend to comply with those provisions.

Kenneth Schmitt
Signature of Owner

7-30-14
Date

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
COOPERATION WITH UTILITIES

Effective: January 1, 1999
Revised: January 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

Replace Article 105.07 of the Standard Specifications with the following:

“105.07 Cooperation with Utilities. The adjustment of utilities consists of the relocation, removal, replacement, rearrangements, reconstruction, improvement, disconnection, connection, shifting, new installation or altering of an existing utility facility in any manner.

When the plans or special provisions include information pertaining to the location of underground utility facilities, such information represents only the opinion of the Department as to the location of such utilities and is only included for the convenience of the bidder. The Department assumes no responsibility in respect to the sufficiency or the accuracy of the information shown on the plans relative to the location of the underground utility facilities.

Utilities which are to be adjusted shall be adjusted by the utility owner or the owner's representative or by the Contractor as a contract item. Generally, arrangements for adjusting existing utilities will be made by the Department prior to project construction; however, utilities will not necessarily be adjusted in advance of project construction and, in some cases, utilities will not be removed from the proposed construction limits. When utility adjustments must be performed in conjunction with construction, the utility adjustment work will be shown on the plans and/or covered by Special Provisions.

When the Contractor discovers a utility has not been adjusted by the owner or the owner's representative as indicated in the contract documents, or the utility is not shown on the plans or described in the Special Provisions as to be adjusted in conjunction with construction, the Contractor shall not interfere with said utility, and shall take proper precautions to prevent damage or interruption of the utility and shall promptly notify the Engineer of the nature and location of said utility.

All necessary adjustments, as determined by the Engineer, of utilities not shown on the plans or not identified by markers, will be made at no cost to the Contractor except traffic structures, light poles, etc., that are normally located within the proposed construction limits as hereinafter defined will not be adjusted unless required by the proposed improvement.

(a) Limits of Proposed Construction for Utilities Paralleling the Roadway. For the purpose of this Article, limits of proposed construction for utilities extending in the same longitudinal direction as the roadway, shall be defined as follows:

(1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 600 mm (2 ft) distant at right angles from the plan or revised slope limits.

In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 1.2 m (4 ft) outside the edges of structure footings or the structure where no footings are required.

(2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.

(3) The lower vertical limits shall be the top of the utility at the depth below the proposed grade as prescribed by the governing agency or the limits of excavation, whichever is less.

(b) Limits of Proposed Construction for Utilities Crossing the Roadway. For the purpose of this Article, limits of proposed construction for utilities crossing the roadway in a generally transverse direction shall be defined as follows:

(1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc. and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction unless otherwise required by the regulations governing the specific utility involved.

(2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general direction as the roadway.

The Contractor may make arrangements for adjustment of utilities outside of the limits of proposed construction provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any adjustments made outside the limits of proposed construction shall be the responsibility of the Contractor unless otherwise provided.

The Contractor shall request all utility owners to field locate their facilities according to Article 107.31. The Engineer may make the request for location from the utility after receipt of notice from the Contractor. On request, the Engineer will make an inspection to verify that the utility company has field located its facilities, but will not assume responsibility for the accuracy of such work. The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners. This field location procedure may be waived if the utility owner has stated in writing to the Department it is satisfied the construction plans are sufficiently accurate. If the utility owner does not submit such statement to the Department, and they do not field locate their facilities in both horizontal and vertical alignment, the Engineer will authorize the Contractor in writing to proceed to locate the facilities in the most economical and reasonable manner, subject to the approval of the Engineer, and be paid according to Article 109.04.

The Contractor shall coordinate with any planned utility adjustment or new installation and the Contractor shall take all precautions to prevent disturbance or damage to utility facilities. Any failure on the part of the utility owner, or their representative, to proceed with any planned utility adjustment or new installation shall be reported promptly by the Contractor to the Engineer orally and in writing.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utilities in their present and/or adjusted positions.

No additional compensation will be allowed for any delays, inconvenience, or damage sustained by the Contractor due to any interference from the said utility facilities or the operation of relocating the said utility facilities.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

City of Aurora

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

AUTOMATED FLAGGER ASSISTANCE DEVICES (BDE)

Effective: January 1, 2008

Description. This work shall consist of furnishing and operating automated flagger assistance devices (AFADs) as part of the work zone traffic control and protection for two-lane highways where two-way traffic is maintained over one lane of pavement. Use of these devices shall be at the option of the Contractor.

Equipment. AFADs shall be according to the FHWA memorandum, "MUTCD - Revised Interim Approval for the use of Automated Flagger Assistance Devices in Temporary Traffic Control Zones (IA-4R)", dated January 28, 2005. The devices shall be mounted on a trailer or a moveable cart and shall meet the requirements of NCHRP 350, Category 4.

The AFAD shall be the Stop/Slow type. This device uses remotely controlled "STOP" and "SLOW" signs to alternately control right-of-way.

Signs for the AFAD shall be according to Article 701.03 of the Standard Specifications and the MUTCD. The signs shall be 24 x 24 in. (600 x 600 mm) having an octagon shaped "STOP" sign on one side and a diamond shaped "SLOW" sign on the opposite side. The letters on the signs shall be 8 in. (200 mm) high. If the "STOP" sign has louvers, the full sign face shall be visible at a distance of 50 ft (15 m) and greater.

The signs shall be supplemented with one of the following types of lights.

- (a) Flashing Lights. When flashing lights are used, white or red flashing lights shall be mounted within the "STOP" sign face and white or yellow flashing lights within the "SLOW" sign face.
- (b) Stop and Warning Beacons. When beacons are used, a stop beacon shall be mounted 24 in. (600 mm) or less above the "STOP" sign face and a warning beacon mounted 24 in. (600 mm) or less above, below, or to the side of the "SLOW" sign face. As an option, a Type B warning light may be used in lieu of the warning beacon.

A "WAIT ON STOP" sign shall be placed on the right hand side of the roadway at a point where drivers are expected to stop. The sign shall be 24 x 30 in. (600 x 750 mm) with a black legend and border on a white background. The letters shall be at least 6 in. (150 mm) high.

This device may include a gate arm or mast arm that descends to a horizontal position when the "STOP" sign is displayed and rises to a vertical position when the "SLOW" sign is displayed. When included, the end of the arm shall reach at least to the center of the lane being controlled. The arm shall have alternating red and white retroreflective stripes, on both sides, sloping downward at 45 degrees toward the side on which traffic will pass. The stripes shall be 6 in. (150 mm) in width and at least 2 in. (50 mm) in height.

Flagging Requirements. Flaggers and flagging requirements shall be according to Article 701.13 of the Standard Specifications and the following.

AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. The flaggers shall be able to view the face of the AFAD and approaching traffic during operation.

To stop traffic, the "STOP" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall descend to a horizontal position. To permit traffic to move, the "SLOW" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall rise to a vertical position.

If used at night, the AFAD location shall be illuminated according to Section 701 of the Standard Specifications.

When not in use, AFADs will be considered nonoperating equipment and shall be stored according to Article 701.11 of the Standard Specifications.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the various traffic control items included in the contract.

80192

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 END SECTIONS FOR PIPE CULVERTS (BDE)

Effective: January 1, 2013

Description. This work shall consist of constructing cast-in-place concrete and precast concrete end sections for pipe culverts. These end sections are shown on the plans as Highway Standard 542001, 542006, 542011, or 542016. This work shall be according to Section 542 of the Standard Specifications except as modified herein.

Materials. Materials shall be according to the following Articles of Division 1000 – Materials of the Standard Specifications.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Precast Concrete End Sections (Note 2)	
(c) Coarse Aggregate (Note 3)	1004.05
(d) Structural Steel (Note 4)	1006.04
(e) Anchor Bolts and Rods (Note 5)	1006.09
(f) Reinforcement Bars	1006.10(a)
(g) Nonshrink Grout	1024.02
(h) Chemical Adhesive Resin System	1027
(i) Mastic Joint Sealer for Pipe	1055
(j) Hand Hole Plugs	1042.16

Note 1. Cast-in-place concrete end sections shall be Class SI, except the 14 day mix design shall have a compressive strength of 5000 psi (34,500 kPa) or a flexural strength of (800 psi) 5500 kPa and a minimum cement factor of 6.65 cwt/cu yd (395 kg/cu m).

Note 2. Precast concrete end sections shall be according to Articles 1042.02 and 1042.03(b)(c)(d)(e) of the Standard Specifications. The concrete shall be Class PC according to Section 1020, and shall have a minimum compressive strength of 5000 psi (34,000 kPa) at 28 days.

Joints between precast sections shall be produced with reinforced tongue and groove ends according to the requirements of ASTM C 1577.

Note 3. The granular bedding placed below a precast concrete end section shall be gradation CA 6, CA 9, CA 10, CA 12, CA 17, CA 18, or CA 19.

Note 4. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.

Note 5. The anchor rods for the culvert ties shall be according to the requirements of ASTM F 1554, Grade 105 (Grade 725).

CONSTRUCTION REQUIREMENTS

The concrete end sections may be precast or cast-in-place construction. Toe walls shall be either precast or cast-in-place, and shall be in proper position and backfilled according to the applicable paragraphs of Article 502.10 of the Standard Specifications prior to the installation of the concrete end sections. If soil conditions permit, cast-in-place toe walls may be poured directly against the soil. When poured directly against the soil, the clear cover of the sides and bottom of the toe wall shall be increased to 3 in. (75 mm) by increasing the thickness of the toe wall.

- (a) Cast-In-Place Concrete End Sections. Cast-in-place concrete end sections shall be constructed according to the requirements of Section 503 of the Standard Specifications and as shown on the plans.
- (b) Precast Concrete End Sections. When the concrete end sections will be precast, shop drawings detailing the slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval.

The excavation and backfilling for precast concrete end sections shall be according to the requirements of Section 502 of the Standard Specifications, except a layer of granular bedding at least 6 in. (150 mm) in thickness shall be placed below the elevation of the bottom of the end section. The granular bedding shall extend a minimum of 2 ft (600 mm) beyond each side of the end section.

Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

Method of Measurement. This work will be measured for payment as each, with each end of each culvert being one each.

Basis of Payment. This work will be paid for at the contract unit price per each for CONCRETE END SECTION, STANDARD 542001; CONCRETE END SECTION, STANDARD 542006; CONCRETE END SECTION, 542011; or CONCRETE END SECTION, 542016, of the pipe diameter and slope specified.

80311

CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH (BDE)

Effective: April 1, 2014
Revised: August 1, 2014

Add the following to Article 606.02 of the Standard Specifications:

“(i) Polyurethane Joint Sealant1050.04”

Revise the fifth paragraph of Article 606.07 of the Standard Specifications to read:

“Transverse contraction and longitudinal construction joints shall be sealed according to Article 420.12, except transverse joints in concrete curb and gutter shall be sealed with polysulfide or polyurethane joint sealant.”

Add the following to Section 1050 of the Standard Specifications:

“**1050.04 Polyurethane Joint Sealant.** The joint sealant shall be a polyurethane sealant, Type S, Grade NS, Class 25 or better, Use T (T₁ or T₂), according to ASTM C 920.”

80334

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: January 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term “equipment” refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment’s respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 ^{1/}	600-749	2002
	750 and up	2006
June 1, 2011 ^{2/}	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 ^{2/}	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (<http://www.epa.gov/cleandiesel/verification/verif-list.htm>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit

device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected.

Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

80261

CONTRACT CLAIMS (BDE)

Effective: April 1, 2014

Revise the first paragraph of Article 109.09(a) of the Standard Specifications to read:

“(a) Submission of Claim. All claims filed by the Contractor shall be in writing and in sufficient detail to enable the Department to ascertain the basis and amount of the claim. As a minimum, the following information must accompany each claim submitted.”

Revise Article 109.09(e) of the Standard Specifications to read:

“(e) Procedure. The Department provides two administrative levels for claims review.

Level I Engineer of Construction

Level II Chief Engineer/Director of Highways or Designee

- (1) Level I. All claims shall first be submitted at Level I. Two copies each of the claim and supporting documentation shall be submitted simultaneously to the District and the Engineer of Construction. The Engineer of Construction, in consultation with the District, will consider all information submitted with the claim and render a decision on the claim within 90 days after receipt by the Engineer of Construction. Claims not conforming to this Article will be returned without consideration. The Engineer of Construction may schedule a claim presentation meeting if in the Engineer of Construction's judgment such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. If a Level I decision is not rendered within 90 days of receipt of the claim, or if the Contractor disputes the decision, an appeal to Level II may be made by the Contractor.
- (2) Level II. An appeal to Level II shall be made in writing to the Engineer of Construction within 45 days after the date of the Level I decision. Review of the claim at Level II shall be conducted as a full evaluation of the claim. A claim presentation meeting may be scheduled if the Chief Engineer/Director of Highways determines that such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. A Level II final decision will be rendered within 90 days of receipt of the written request for appeal.

Full compliance by the Contractor with the provisions specified in this Article is a contractual condition precedent to the Contractor's right to seek relief in the Court of Claims. The Director's written decision shall be the final administrative action of the Department. Unless the Contractor files a claim for adjudication by the Court of Claims within 60 days after the date of the written decision, the failure to file shall constitute a release and waiver of the claim.”

80335

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: August 2, 2011

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is

based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 20.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal: or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's website at 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 it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. 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

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

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: April 1, 2012

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced ten feet apart longitudinally along the unconfined pavement edge and centered at the random density test location.”

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

“Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	N _{design} = 50	93.0 – 97.4%	91.0%
IL-9.5, IL-12.5	N _{design} ≥ 90	92.0 – 96.0%	90.0%
IL-9.5, IL-9.5L, IL-12.5	N _{design} < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	N _{design} ≥ 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	N _{design} < 90	93.0 – 97.4%	90.0%

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%
All Other	Ndesign = 30	93.0 - 97.4%	90.0%”

80246

LRFD STORM SEWER BURIAL TABLES (BDE)

Effective: November 1, 2013

Revise Article 550.02 of the Standard Specifications to read as follows:

"Item	Article Section
(a) Clay Sewer Pipe	1040.02
(b) Extra Strength Clay Pipe	1040.02
(c) Concrete Sewer, Storm Drain, and Culvert Pipe	1042
(d) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe	1042
(e) Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (Note 1)	1042
(f) Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe (Note 1)	1042
(g) Polyvinyl Chloride (PVC) Pipe	1040.03
(h) Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior	1040.03
(i) Corrugated Polypropylene (CPP) Pipe with Smooth Interior	1040.07
(j) Rubber Gaskets and Preformed Flexible Joint Sealants for Concrete Pipe	1056
(k) Mastic Joint Sealer for Pipe	1055
(l) External Sealing Band	1057
(m) Fine Aggregate (Note 2)	1003.04
(n) Coarse Aggregate (Note 3)	1004.05
(o) Reinforcement Bars and Welded Wire Fabric	1006.10
(p) Handling Hole Plugs	1042.16
(q) Polyethylene (PE) Pipe with a Smooth Interior	1040.04
(r) Corrugated Polyethylene (PE) Pipe with a Smooth Interior	1040.04

Note 1. The class of elliptical and arch pipe used for various storm sewer sizes and heights of fill shall conform to the requirements for circular pipe.

Note 2. The fine aggregate shall be moist.

Note 3. The coarse aggregate shall be wet."

Revise the table for permitted materials in Article 550.03 of the Standard Specifications as follows:

"Class	Materials
A	Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
B	Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe Flexible Pipes: Polyvinyl Chloride (PVC) Pipe Corrugated Polyvinyl Chloride Pipe (PVC) with a Smooth Interior Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polypropylene (CPP) Pipe with a Smooth Interior"

Replace the storm sewers tables in Article 550.03 of the Standard Specifications with the following:

STORM SEWERS
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 1										Type 2									
	Fill Height: 3' and less With 1' minimum cover										Fill Height: Greater than 3' not exceeding 10'									
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP				
10	NA	3	X	X	X	X	X	NA	1	*X	X	X	X	X	NA					
12	IV	NA	X	X	X	X	X	II	1	*X	X	X	X	X	X					
15	IV	NA	NA	X	X	NA	X	II	1	*X	X	X	X	X	X					
18	IV	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X					
21	III	NA	NA	X	X	NA	NA	II	2	X	X	X	X	NA	NA					
24	III	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X					
27	III	NA	NA	NA	NA	NA	NA	II	3	X	NA	NA	NA	NA	NA					
30	IV	NA	NA	X	X	X	X	II	3	X	X	X	X	X	X					
33	III	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA					
36	III	NA	NA	NA	X	X	X	II	NA	X	X	X	X	X	X					
42	II	NA	NA	X	X	NA	X	II	NA	X	X	NA	NA	NA	NA					
48	II	NA	NA	X	X	X	X	II	NA	X	X	X	X	X	NA					
54	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
60	II	NA	NA	NA	NA	NA	X	II	NA	NA	NA	NA	NA	NA	X					
66	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
72	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
78	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
84	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
90	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					
96	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					
102	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					
108	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
 CSP Concrete Sewer, Storm drain, and Culvert Pipe
 PVC Polyvinyl Chloride Pipe
 CPVC Corrugated Polyvinyl Chloride Pipe
 ESCP Extra Strength Clay Pipe
 PE Polyethylene Pipe with a Smooth Interior
 CPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material may be used for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe

STORM SEWERS (Metric)
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 1										Type 2									
	Fill Height: 1 m' and less With 300 mm minimum cover										Fill Height: Greater than 1 m not exceeding 3 m									
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP				
250	NA	3	X	X	X	X	X	NA	1	*X	X	X	X	X	NA					
300	IV	NA	X	X	X	X	X	II	1	*X	X	X	X	X	X					
375	IV	NA	NA	X	X	X	X	II	1	X	X	X	X	X	X					
450	IV	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X					
525	III	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X					
600	III	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X					
675	III	NA	NA	NA	NA	NA	NA	II	3	X	NA	NA	NA	NA	NA					
750	IV	NA	NA	X	X	X	X	II	3	X	X	X	X	X	X					
825	III	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA					
900	III	NA	NA	NA	X	X	X	II	NA	X	X	X	X	X	X					
1050	II	NA	NA	X	NA	NA	NA	II	NA	X	X	NA	NA	NA	NA					
1200	II	NA	X	X	X	X	X	II	NA	X	X	X	X	X	X					
1350	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
1500	II	NA	NA	NA	NA	NA	X	II	NA	NA	NA	NA	NA	NA	X					
1650	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
1800	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
1950	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
2100	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA					
2250	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					
2400	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					
2550	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					
2700	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA					

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 CPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material may be used for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe

STORM SEWERS
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 3										Type 4							
	Fill Height: Greater than 10' not exceeding 15'										Fill Height: Greater than 15' not exceeding 20'							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPP			
10	NA	2	X	X	X	X	X	NA	3	X	X	X	X	NA	NA			
12	III	2	X	X	X	X	X	IV	NA	NA	X	X	X	X	NA			
15	III	3	X	X	X	NA	NA	IV	NA	NA	X	X	X	NA	X			
18	III	NA	X	X	X	NA	X	IV	NA	NA	X	X	X	NA	NA			
21	III	NA	NA	X	X	NA	NA	IV	NA	NA	X	X	X	NA	NA			
24	III	NA	NA	X	X	NA	NA	IV	NA	NA	X	X	X	NA	NA			
27	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
30	III	NA	NA	NA	X	X	X	IV	NA	NA	X	X	X	NA	NA			
33	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
36	III	NA	NA	NA	X	X	X	IV	NA	NA	X	X	X	NA	NA			
42	III	NA	NA	NA	X	X	X	IV	NA	NA	X	X	X	NA	NA			
48	III	NA	NA	NA	X	X	X	IV	NA	NA	X	X	X	NA	NA			
54	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
60	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
66	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
72	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
78	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
84	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA			
90	III	NA	NA	NA	NA	NA	NA	1680	NA	NA	NA	NA	NA	NA	NA			
96	III	NA	NA	NA	NA	NA	NA	1690	NA	NA	NA	NA	NA	NA	NA			
102	IV	NA	NA	NA	NA	NA	NA	1700	NA	NA	NA	NA	NA	NA	NA			
108	IV	NA	NA	NA	NA	NA	NA	1710	NA	NA	NA	NA	NA	NA	NA			

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 PE Polyethylene Pipe with a Smooth Interior
 CPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material may be used for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe
 Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

STORM SEWERS (metric)
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 3										Type 4									
	Fill Height: Greater than 3 m not exceeding 4.5 m										Fill Height: Greater than 4.5 m not exceeding 6 m									
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPP					
250	NA	2	X	X	X	X	X	NA	3	X	X	X	X	X	NA					
300	III	2	X	X	X	X	X	IV	NA	NA	X	X	X	X	NA					
375	III	3	X	X	X	NA	X	IV	NA	NA	X	X	X	NA	X					
450	III	NA	X	X	X	NA	NA	IV	NA	NA	X	X	X	X	NA					
525	III	NA	NA	NA	X	NA	NA	IV	NA	NA	X	X	X	NA	NA					
600	III	NA	NA	X	X	NA	NA	IV	NA	NA	X	X	X	NA	NA					
675	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
750	III	NA	NA	NA	X	NA	X	IV	NA	NA	X	X	X	NA	NA					
825	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
900	III	NA	NA	X	X	X	NA	IV	NA	NA	X	X	X	NA	NA					
1050	III	NA	NA	X	NA	X	NA	IV	NA	NA	X	NA	NA	NA	NA					
1200	III	NA	NA	X	NA	X	NA	IV	NA	NA	X	NA	NA	NA	NA					
1350	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
1500	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
1650	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
1800	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
1950	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
2100	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA					
2250	III	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA					
2400	III	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA					
2550	IV	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA					
2700	70	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA					

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 PE Polyethylene Pipe with a Smooth Interior
 CPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material is Not Acceptable for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe
 Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

STORM SEWERS
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 5			Type 6			Type 7	
	Fill Height: Greater than 20' not exceeding 25'			Fill Height: Greater than 25' not exceeding 30'			Fill Height: Greater than 30' not exceeding 35'	
	RCCP	PVC	CPVC	RCCP	PVC	CPVC	RCCP	CPVC
10	NA	X	X	NA	X	X	NA	X
12	IV	X	X	V	X	X	V	X
15	IV	X	X	V	X	X	V	X
18	IV	X	X	V	X	X	V	X
21	IV	X	X	V	X	X	V	X
24	IV	X	X	V	X	X	V	X
27	IV	NA	NA	V	NA	NA	V	NA
30	IV	X	X	V	X	X	V	X
33	IV	NA	NA	V	NA	NA	V	NA
36	IV	X	X	V	X	X	V	X
42	IV	X	NA	V	X	NA	V	NA
48	IV	X	NA	V	X	NA	V	NA
54	IV	NA	NA	V	NA	NA	V	NA
60	IV	NA	NA	V	NA	NA	V	NA
66	IV	NA	NA	V	NA	NA	V	NA
72	V	NA	NA	V	NA	NA	V	NA
78	2020	NA	NA	2370	NA	NA	2730	NA
84	2020	NA	NA	2380	NA	NA	2740	NA
90	2030	NA	NA	2390	NA	NA	2750	NA
96	2040	NA	NA	2400	NA	NA	2750	NA
102	2050	NA	NA	2410	NA	NA	2760	NA
108	2060	NA	NA	2410	NA	NA	2770	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay Pipe

X This material may be used for the given pipe diameter and fill height.

NA This material is Not Acceptable for the given pipe diameter and fill height.

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

STORM SEWERS (metric)
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter In.	Type 5			Type 6			Type 7	
	Fill Height: Greater than 20' not exceeding 25'	Fill Height: Greater than 25'	Fill Height: Greater than 30'	Fill Height: Greater than 25' not exceeding 30'	Fill Height: Greater than 30' not exceeding 35'	Fill Height: Greater than 30' not exceeding 35'	Fill Height: Greater than 30' not exceeding 35'	Fill Height: Greater than 30' not exceeding 35'
250	NA	X	X	NA	X	X	NA	X
300	IV	X	X	V	X	X	V	X
375	IV	X	X	V	X	X	V	X
450	IV	X	X	V	X	X	V	X
525	IV	X	X	V	X	X	V	X
600	IV	X	X	V	X	X	V	X
675	IV	NA	NA	V	NA	NA	V	NA
750	IV	X	X	V	X	X	V	X
825	IV	NA	NA	V	NA	NA	V	NA
900	IV	X	X	V	X	X	V	X
1050	IV	X	NA	V	X	NA	V	NA
1200	IV	X	NA	V	X	NA	V	NA
1350	IV	NA	NA	V	NA	NA	V	NA
1500	IV	NA	NA	V	NA	NA	V	NA
1650	IV	NA	NA	V	NA	NA	V	NA
1800	V	NA	NA	V	NA	NA	V	NA
1950	100	NA	NA	110	NA	NA	130	NA
2100	100	NA	NA	110	NA	NA	130	NA
2250	100	NA	NA	110	NA	NA	130	NA
2400	100	NA	NA	120	NA	NA	130	NA
2550	100	NA	NA	120	NA	NA	130	NA
2700	100	NA	NA	120	NA	NA	130	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
PVC Polyvinyl Chloride Pipe
CPVC Corrugated Polyvinyl Chloride Pipe
ESCP Extra Strength Clay Pipe
X This material may be used for the given pipe diameter and fill height.
NA This material is Not Acceptable for the given pipe diameter and fill height.
Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

Revise the sixth paragraph of Article 550.06 of the Standard Specifications to read:

“PVC, PE and CPP pipes shall be joined according to the manufacturer’s specifications.”

Revise the first and second paragraphs of Article 550.08 of the Standard Specifications to read:

“**550.08 Deflection Testing for Storm Sewers.** All PVC, PE, and CPP storm sewers shall be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted. The testing shall be performed in the presence of the Engineer.

For PVC, PE, and CPP storm sewers with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC, PE, and CPP storm sewers with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel shall be used.”

Revise the fifth paragraph of Article 550.08 to read as follows.

“The outside diameter of the mandrel shall be 95 percent of the base inside diameter. For all PVC pipe the base inside diameter shall be defined using ASTM D 3034 methodology. For all PE and CPP pipe, the base inside diameter shall be defined as the average inside diameter based on the minimum and maximum tolerances specified in the corresponding ASTM or AASHTO material specifications.”

Revise the first paragraph of Article 1040.03 of the Standard Specifications to read:

“**1040.03 Polyvinyl Chloride (PVC) Pipe.** Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.”

Delete Articles 1040.03(e) and (f) of the Standard Specifications.

Revise Articles 1040.04(c) and (d) of the Standard Specifications to read:

“(c) PE Profile Wall Pipe for Insertion Lining. The pipe shall be according to ASTM F 894. When used for insertion lining of pipe culverts, the pipe liner shall have a minimum pipe stiffness of 46 psi (317 kPa) at five percent deflection for nominal inside diameters of 42 in. (1050 mm) or less. For nominal inside diameters of greater than 42 in. (1050 mm), the pipe liner shall have a minimum pipe stiffness of 32.5 psi (225 kPa) at five percent deflection. All sizes shall have wall construction that presents essentially smooth internal and external surfaces.

(d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written

certification that the material meets those properties and the resin used to manufacture the pipe meets or exceeds the minimum cell classification requirements.”

Add the following to Section 1040 of the Standard Specifications:

“1040.08 Polypropylene (PP) Pipe. Storage and handling shall be according to the manufacturer’s recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.

- (a) Corrugated PP Pipe with a Smooth Interior. The pipe shall be according to AAHSTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D.
- (b) Perforated Corrugated PP Pipe with A Smooth Interior. The pipe shall be according to AASHTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type SP. In addition, the top centerline of the pipe shall be marked so that it is readily visible from the top of the trench before backfilling, and the upper ends of the slot perforations shall be a minimum of ten degrees below the horizontal.”

80325

PAYROLLS AND PAYROLL RECORDS (BDE)

Effective: January 1, 2014

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

“STATEMENTS AND PAYROLLS

The payroll records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable.

The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box (“No Work”, “Suspended”, or “Complete”) checked on the form.”

STATE CONTRACTS. Revise Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

“IV.COMPLIANCE WITH THE PREVAILING WAGE ACT

1. **Prevailing Wages.** All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of five years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll

records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department or the Department of Labor; and Federal, State, or local law enforcement agencies and prosecutors.

3. Submission of Payroll Records. The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor, or an officer, employee, or officer thereof, which avers that: (i) he or she has examined the records and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class A misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

80331

PORTLAND CEMENT CONCRETE – CURING OF ABUTMENTS AND PIERS (BDE)

Effective: January 1, 2014

Revise Note 7/ of the Index Table of Curing and Protection of Concrete Construction of Article 1020.13 of the Standard Specifications to read:

“7/ Asphalt emulsion for waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18. The top surfaces of abutments and piers shall be cured according to Article 1020.13(a)(3) or (5).”

80332

PORTLAND CEMENT CONCRETE EQUIPMENT (BDE)

Effective: November 1, 2013

Add the following to the first paragraph of Article 1103.03(a)(5) of the Standard Specifications to read:

“As an alternative to a locking key, the start and finish time for mixing may be automatically printed on the batch ticket. The start and finish time shall be reported to the nearest second.”

80326

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

- “(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics’ Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department’s Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department’s obligation to pay the Contractor, the Contractor’s obligation to pay the subcontractor, and the Contractor’s or subcontractor’s total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.”

80328

QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Revised: January 1, 2014

Revise Note 7/ of Schedule B of Recurring Special Provision Check Sheet #31 of the Standard Specifications to read:

- 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 two 6 x 12 in. (150 x 300 mm) cylinder breaks, three 4 x 8 in. (100 x 200 mm) cylinder breaks, or two beam breaks for field tests. Per Illinois Modified AASHTO T 23, cylinders shall be 6 x 12 in. (150 x 300 mm) when the nominal maximum size of the coarse aggregate exceeds 1 in. (25 mm).

80281

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 547 West Jackson Blvd., Suite 1509 Chicago, IL 60661	78 @ 35 - 55 MPH	40 @ 40 MPH
DOT/AAR No.: 079 557V RR Division: Chicago	RR Mile Post: 36.09 RR Sub-Division: First	
For Freight/Passenger Information Contact: Ms. Pat Casler For Insurance Information Contact: Rosa Martinez, Marsh Co.		Phone: 312-850-5680 Phone: 214-303-8519

DOT/AAR No.:
RR Division:

RR Mile Post:
RR Sub-Division:

For Freight/Passenger Information Contact:
For Insurance Information Contact:

Phone:
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

REINFORCEMENT BARS (BDE)

Effective: November 1, 2013

Revise the first and second paragraphs of Article 508.05 of the Standard Specifications to read:

“508.05 Placing and Securing. All reinforcement bars shall be placed and tied securely at the locations and in the configuration shown on the plans prior to the placement of concrete. Manual welding of reinforcement may only be permitted on precast concrete products as indicated in the current Bureau of Materials and Physical Research Policy Memorandum “Quality Control / Quality Assurance Program for Precast Concrete Products”, and for precast prestressed concrete products as indicated in the Department’s current “Manual for Fabrication of Precast Prestressed Concrete Products”. Reinforcement bars shall not be placed by sticking or floating into place or immediately after placement of the concrete.

Bars shall be tied at all intersections, except where the center to center dimension is less than 1 ft (300 mm) in each direction, in which case alternate intersections shall be tied. Molded plastic clips may be used in lieu of wire to secure bar intersections, but shall not be permitted in horizontal bar mats subject to construction foot traffic or to secure longitudinal bar laps. Plastic clips shall adequately secure the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. Plastic clips may be recycled plastic, and shall meet the approval of the Engineer. The number of ties as specified shall be doubled for lap splices at the stage construction line of concrete bridge decks when traffic is allowed on the first completed stage during the pouring of the second stage.”

Revise the fifth paragraph of Article 508.05 of the Standard Specifications to read:

“Supports for reinforcement in bridge decks shall be metal. For all other concrete construction the supports shall be metal or plastic. Metal bar supports shall be made of cold-drawn wire, or other approved material and shall be either epoxy coated, galvanized or plastic tipped. When the reinforcement bars are epoxy coated, the metal supports shall be epoxy coated. Plastic supports may be recycled plastic. Supports shall be provided in sufficient number and spaced to provide the required clearances. Supports shall adequately support the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. The legs of supports shall be spaced to allow an opening that is a minimum 1.33 times the nominal maximum aggregate size used in the concrete. Nominal maximum aggregate size is defined as the largest sieve which retains any of the aggregate sample particles. All supports shall meet the approval of the Engineer.”

Revise the first sentence of the eighth paragraph of Article 508.05 of the Standard Specifications to read:

“Epoxy coated reinforcement bars shall be tied with plastic coated wire, epoxy coated wire, or molded plastic clips where allowed.”

Add the following sentence to the end of the first paragraph of Article 508.06(c) of the Standard Specifications:

“In addition, the total slip of the bars within the splice sleeve of the connector after loading in tension to 30 ksi (207 MPa) and relaxing to 3 ksi (20.7 MPa) shall not exceed 0.01 in. (254 microns).”

Revise Article 1042.03(d) of the Standard Specifications to read:

“(d) Reinforcement and Accessories: The concrete cover over all reinforcement shall be within $\pm 1/4$ in. (± 6 mm) of the specified cover.

Welded wire fabric shall be accurately bent and tied in place.

Miscellaneous accessories to be cast into the concrete or for forming holes and recesses shall be carefully located and rigidly held in place by bolts, clamps, or other effective means. If paper tubes are used for vertical dowel holes, or other vertical holes which require grouting, they shall be removed before transportation to the construction site.”

80327

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2012

Revised: November 2, 2012

Revise Article 669.01 of the Standard Specifications to read:

“669.01 Description. This work shall consist of the transportation and proper disposal of contaminated soil and water. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.”

Revise Article 669.08 of the Standard Specifications to read:

“669.08 Contaminated Soil and/or Groundwater Monitoring. The Contractor shall hire a qualified environmental firm to monitor the area containing the regulated substances. The affected area shall be monitored with a photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID). Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. No excavated soils can be taken to a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation with detectable PID or FID meter readings that are above background. The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily. All testing shall be done by a qualified engineer/technician. Such testing and monitoring shall be included in the work. The Contractor shall identify the exact limits of removal of non-special waste, special waste, or hazardous waste. All limits shall be approved by the Engineer prior to excavation. The Contractor shall take all necessary precautions.

Based upon the land use history of the subject property and/or PID or FID readings indicating contamination, a soil or groundwater sample shall be taken from the same location and submitted to an approved laboratory. Soil or groundwater samples shall be analyzed for the contaminants of concern, including pH, based on the property's land use history or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605. The analytical results shall serve to document the level of soil contamination. Soil and groundwater samples may be required at the discretion of the Engineer to verify the level of soil and groundwater contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, location and elevation, and any other observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 and "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective."

Replace the first two paragraphs of Article 669.09 of the Standard Specifications with the following:

"669.09 Contaminated Soil and/or Groundwater Management and Disposal. The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
 - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. Such soil excavated for storm sewers can be placed back into the excavated trench as backfill, when suitable, unless trench backfill is specified. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
 - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

- (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
- (5) When the Engineer determines soil cannot be managed according to Articles 669.09(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC but the pH of the soil is less than 6.25 or greater than 9.0, the excavated soil can be utilized within the construction limits or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation.
- (c) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste.

All groundwater encountered within lateral trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer."

Revise Article 669.14 of the Standard Specifications to read:

"669.14 Final Environmental Construction Report. At the end of the project, the Contractor will prepare and submit three copies of the Environmental Construction Report on the activities conducted during the life of the project, one copy shall be submitted to the Resident Engineer, one copy shall be submitted to the District's Environmental Studies Unit, and one copy shall be submitted with an electronic copy in Adode.pdf format to the Geologic

and Waste Assessment Unit, Bureau of Design and Environment, IDOT, 2300 South Dirksen Parkway, Springfield, Illinois 62764. The technical report shall include all pertinent information regarding the project including, but not limited to:

- (a) Measures taken to identify, monitor, handle, and dispose of soil or groundwater containing regulated substances, to prevent further migration of regulated substances, and to protect workers,
- (b) Cost of identifying, monitoring, handling, and disposing of soil or groundwater containing regulated substances, the cost of preventing further migration of regulated substances, and the cost for worker protection from the regulated substances. All cost should be in the format of the contract pay items listed in the contract plans (identified by the preliminary environmental site investigation (PESA) site number),
- (c) Plan sheets showing the areas containing the regulated substances,
- (d) Field sampling and testing results used to identify the nature and extent of the regulated substances,
- (e) Waste manifests (identified by the preliminary environmental site investigation (PESA) site number) for special or hazardous waste disposal, and
- (f) Landfill tickets (identified by the preliminary environmental site investigation (PESA) site number) for non-special waste disposal."

Revise the second paragraph of Article 669.16 of the Standard Specifications to read:

"The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL."

80283

REMOVAL AND DISPOSAL OF SURPLUS MATERIALS (BDE)

Effective: November 2, 2012

Revise the first four paragraphs of Article 202.03 of the Standard Specifications to read:

“202.03 Removal and Disposal of Surplus, Unstable, Unsuitable, and Organic Materials. Suitable excavated materials shall not be wasted without permission of the Engineer. The Contractor shall dispose of all surplus, unstable, unsuitable, and organic materials, in such a manner that public or private property will not be damaged or endangered.

Suitable earth, stones and boulders naturally occurring within the right-of-way may be placed in fills or embankments in lifts and compacted according to Section 205. Broken concrete without protruding metal bars, bricks, rock, stone, reclaimed asphalt pavement with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities may be used in embankment or in fill. If used in fills or embankments, these materials shall be placed and compacted to the satisfaction of the Engineer; shall be buried under a minimum of 2 ft (600 mm) of earth cover (except when the materials include only uncontaminated dirt); and shall not create an unsightly appearance or detract from the natural topographic features of an area. Broken concrete without protruding metal bars, bricks, rock, or stone may be used as riprap as approved by the Engineer. If the materials are used for fill in locations within the right-of-way but outside project construction limits, the Contractor must specify to the Engineer, in writing, how the landscape restoration of the fill areas will be accomplished. Placement of fill in such areas shall not commence until the Contractor's landscape restoration plan is approved by the Engineer.

Aside from the materials listed above, all other construction and demolition debris or waste shall be disposed of in a licensed landfill, recycled, reused, or otherwise disposed of as allowed by State or Federal laws and regulations. When the Contractor chooses to dispose of uncontaminated soil at a clean construction and demolition debris (CCDD) facility or at an uncontaminated soil fill operation, it shall be the Contractor's responsibility to have the pH of the material tested to ensure the value is between 6.25 and 9.0, inclusive. A copy of the pH test results shall be provided to the Engineer.

A permit shall be obtained from IEPA and made available to the Engineer prior to open burning of organic materials (i.e., plant refuse resulting from pruning or removal of trees or shrubs) or other construction or demolition debris. Organic materials originating within the right-of-way limits may be chipped or shredded and placed as mulch around landscape plantings within the right-of-way when approved by the Engineer. Chipped or shredded material to be placed as mulch shall not exceed a depth of 6 in. (150 mm).”

80319

TRAINING SPECIAL PROVISIONS (BDE) This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 2 . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather 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

TRAVERSABLE PIPE GRATE (BDE)

Effective: January 1, 2013

Revised: April 1, 2014

Description. This work shall consist of constructing a traversable pipe grate on a concrete end section.

Materials. Materials shall be according to the following Articles of Division 1000 – Materials of the Standard Specifications.

Item	Article/Section
(a) Traversable Pipe Grate Components (Note 1)	
(b) Chemical Adhesive Resin System	1027
(c) High Strength Steel Bolts, Nuts, and Washers (Note 2).....	1006.08

Note 1. All steel pipe shall be according to ASTM A 53 (Type E or S), Grade B, or ASTM A 500 Grade B, standard weight (SCH. 40). Structural steel shapes and plates shall be according to AASHTO M270 Grade 50 (M 270M Grade 345) and the requirements of Article 1006.04 of the Standard Specifications. All steel components of the grating system shall be galvanized according to AASHTO M 111 or M 232 as applicable.

Anchor rods shall be according to ASTM F 1554, Grade 36 (Grade 250).

Note 2. Threaded rods conforming to the requirements of ASTM F 1554, Grade 105 (Grade 725) may be used for the thru bolts.

CONSTRUCTION REQUIREMENTS

Fabrication of the traversable pipe grate shall be according to the requirements of Section 505 of the Standard Specifications and as shown on the plans.

Anchor rods shall be set according to Article 509.06 of the Standard Specifications. Bolts and anchor rods shall be snug tightened by a few impacts of an impact wrench or the full force of a worker using an ordinary spud wrench. Thru bolts shall be snug tightened and shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

Splicing of pipes shall be made by utilizing full penetration butt welds according to Article 505.04(q) of the Standard Specifications. In lieu of welding, bolted or sleeve type splices may be utilized, provided the splices are located over intermediate supports with no more than one splice per pipe run with the exception that no splice may occur in pipe runs under 30 ft (9 m) in length.

Method of Measurement. This work will be measured for payment in place in feet (meters). The length measured shall be along the pipe grate elements from end to end for both longitudinal and intermediate support pipes.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for TRAVERSABLE PIPE GRATE.

80318

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: November 1, 2013

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Materials.

Add the following to Article 1030.02 of the Standard Specifications.

"(h) Warm Mix Asphalt (WMA) Technologies (Note 3)"

Add the following note to Article 1030.02 of the Standard Specifications.

"Note 3. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, "Warm-Mix Asphalt Technologies"."

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing

by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements.”

Add the following to Article 1102.01(a) of the Standard Specifications.

“(13) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.
- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes.”

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

“(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification.

Production.

Revise the second paragraph of Article 1030.06(a) of the Standard Specifications to read:

“At the start of mix production for HMA, WMA, and HMA using WMA technologies, QC/QA mixture start-up will be required for the following situations; at the beginning of production of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix.”

Quality Control/Quality Assurance Testing.

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

Parameter	Frequency of Tests		Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
Aggregate Gradation % passing sieves: 1/2 in. (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), No. 30 (600 μm) No. 200 (75 μm) Note 1.	1 washed ignition oven test on the mix per half day of production Note 4.	1 washed ignition oven test on the mix per day of production Note 4.	Illinois Procedure
Asphalt Binder Content by Ignition Oven Note 2.	1 per half day of production	1 per day	Illinois-Modified AASHTO T 308
VMA Note 3.	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	N/A	Illinois-Modified AASHTO R 35
Air Voids Bulk Specific Gravity of Gyrotory Sample Note 5.	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	1 per day	Illinois-Modified AASHTO T 312
Maximum Specific Gravity of Mixture	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per	1 per day	Illinois-Modified AASHTO T 209

Parameter	Frequency of Tests	Frequency of Tests	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture day thereafter (first sample of the day)	All Other Mixtures	

Note 1. The No. 8 (2.36 mm) and No. 30 (600 µm) sieves are not required for All Other Mixtures.

Note 2. The Engineer may waive the ignition oven requirement for asphalt binder content if the aggregates to be used are known to have ignition asphalt binder content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the asphalt binder content.

Note 3. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design.

Note 4. The Engineer reserves the right to require additional hot bin gradations for batch

Note 5. The WMA compaction temperature for mixture volumetric testing shall be 270 ± 5 °F (132 ± 3 °C) for quality control testing. The WMA compaction temperature for quality assurance testing will be 270 ± 5 °F (132 ± 3 °C) if the mixture is not allowed to cool to room temperature. If the mixture is allowed to cool to room temperature it shall be reheated to standard HMA compaction temperatures.”

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

“The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C). WMA shall be delivered at a minimum temperature of 215 °F (102 °C).”

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

The Contractor shall provide a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used on the jobsite; or used for the delivery and/or removal of equipment/material to and from the jobsite. The jobsite shall also include offsite locations, such as plant sites or storage sites, when those locations are used solely for this contract.

The report shall be submitted on the form provided by the Department within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur. The report shall be submitted to the Engineer and a copy shall be provided to the district EEO Officer.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80302

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 210 working days.

80071

HIGH LOAD MULTI-ROTATIONAL BEARINGS

Effective: October 13, 1988

Revised: October 30, 2012

Description. This work shall consist of furnishing and installing High Load Multi-Rotational type bearing assemblies at the locations shown on the plans.

High Load Multi-Rotational (HLMR) bearings shall be one of the following at the Contractors option unless otherwise noted on the plans:

- a) Pot Bearings. These bearings shall be manufactured so that the rotational capability is provided by an assembly having a rubber disc of proper thickness, confined in a manner so it behaves like a fluid. The disc shall be installed, with a snug fit, into a steel cylinder and confined by a tight fitting piston. The outside diameter of the piston shall be no more than 0.03 in. (750 microns) less than the inside diameter of the cylinder at the interface level of the piston and rubber disc. The sides of the piston shall be beveled. PTFE sheets, or silicone grease shall be utilized to facilitate rotation of the rubber disc. Suitable brass sealing rings shall be provided to prevent any extrusion between piston and cylinder.
- b) Shear Inhibited Disc Type Bearing. The Structural Element shall be restricted from shear by the pin and ring design and need not be completely confined as with the Pot Bearing design. The disc shall be a molded monolithic Polyether Urethane compound.

These bearings shall be further subdivided into one or more of the following types:

- 1) Fixed. These allow rotation in any direction but are fixed against translation.
- 2) Guided Expansion. These allow rotation in any direction but translation only in limited directions.
- 3) Non-Guided Expansion. These allow rotation and translation in any direction.

The HLMR bearings shall be of the type specified and designed for the loads shown on the plans. The design of the top and bottom bearing plates are based on detail assumptions which are not applicable to all suppliers and may require modifications depending on the supplier chosen by the Contractor. The overall depth dimension for the HLMR bearings shall be as specified on the plans. The horizontal dimensions shall be limited to the available bearing seat area. Any modifications required to accommodate the bearings chosen shall be submitted to the Engineer for approval prior to ordering materials. Modifications required shall be made at no additional cost to the State. Inverted pot bearing configurations will not be permitted.

The Contractor shall comply with all manufacturer's material, fabrication and installation requirements specified.

All bearings shall be supplied by prequalified manufacturers. The Department will maintain a list of prequalified manufacturers.

Submittals. Shop drawings shall be submitted to the Engineer for approval according to Article 105.04 of the Standard Specifications. In addition the Contractor shall furnish certified copies of the bearing manufacturer's test reports on the physical properties of the component materials for the bearings to be furnished and a certification by the bearing manufacturer stating the bearing assemblies furnished conform to all the requirements shown on the plans and as herein specified. Submittals with insufficient test data and supporting certifications will be rejected.

Materials. The materials for the HLMR bearing assemblies shall be according to the following:

- (a) Elastomeric Materials. The rubber disc for Pot bearings shall be according to Article 1083.02(a) of the Standard Specifications.
- (b) Polytetrafluoroethylene (PTFE) Material. The PTFE material shall be according to Article 1083.02(b) of the Standard Specifications.
- (c) Stainless Steel Sheets: The stainless steel sheets shall be of the thickness specified and shall be according to ASTM A 240 (A 240M), Type 302 or 304. The sliding surface shall be polished to a bright mirror finish less than 20 micro-in. (510 nm) root mean square.
- (d) Structural Steel. All structural steel used in the bearing assemblies shall be according to AASHTO M 270, Grade 50 (M 270M Grade 345), unless otherwise specified.
- (e) Threaded studs. The threaded stud, when required, shall conform to the requirements of Article 1083.02(d)(4) of the Standard Specifications.

- (f) Polyether Urethane for Disc bearings shall be according to all of the following requirements:

PHYSICAL PROPERTY	ASTM TEST METHOD	REQUIREMENTS	
Hardness, Type D durometer	D 2240	45 Min	65 Max
Tensile Stress, psi (kPa) At 100% elongation, min	D 412	1500 psi (10,350 kPa)	2300 psi (15,900 kPa)
Tensile Stress, psi (kPa) At 200% elongation, min	D 412	2800 psi (19,300 kPa)	4000 psi (27,600 kPa)
Tensile Strength, psi (kPa), min	D 412	4000 psi (27,600 kPa)	6000 psi (41,400 kPa)
Ultimate Elongation, %, min	D 412	350	220
Compression Set 22 hr. at 158 °F (70 °C), Method B %, max	D 395	40	40

The physical properties for a durometer hardness between the minimum and maximum values shown above shall be determined by straight line interpolation.

Design. The fabricator shall design the HLMR bearings according to the appropriate AASHTO Design Specifications noted on the bridge plans.

Fabrication. The bearings shall be complete factory-produced assemblies. They shall provide for rotation in all directions and for sliding, when specified, in directions as indicated on the plans. All bearings shall be furnished as a complete unit from one manufacturing source. All material used in the manufacture shall be new and unused with no reclaimed material incorporated into the finished assembly.

The translation capability for both guided and non-guided expansion bearings shall be provided by means of a polished stainless steel sliding plate that bears on a PTFE sheet bonded and recessed to the top surface of the piston or disc. The sliding element of expansion bearings shall be restrained against movement in the fixed direction by exterior guide bars capable of resisting the horizontal forces or 20 percent of the vertical design load on the bearing applied in any direction, whichever is greater. The sliding surfaces of the guide bar shall be of PTFE sheet and stainless steel. Guiding off of the fixed base, or any extension of the base, will not be permitted.

Structural steel bearing plates shall be fabricated according to Article 505.04(I) of the Standard Specifications. Prior to shipment the exposed edges and other exposed portions of the structural steel bearing plates shall be cleaned and painted according to Articles 506.03 and 506.04 of the Standard Specifications. Painting shall be with the paint specified for shop painting of structural steel. During cleaning and painting the stainless steel, PTFE sheet and neoprene shall be protected from abrasion and paint.

PTFE sheets shall be bonded to steel under factory controlled conditions using heat and pressure for the time required to set the epoxy adhesive used. The PTFE sheet shall be free from bubbles and the sliding surface shall be burnished to an absolutely smooth surface.

The steel piston and the steel cylinder for pot bearings shall each be machined from a solid piece of steel. The steel base cylinder shall be either integrally machined, recessed into with a snug fit, or continuously welded to its bottom steel bearing plate.

Packaging. Each HLMR bearing assembly shall be fully assembled at the manufacturing plant and delivered to the construction site as complete units. The assemblies shall be packaged, crated or wrapped so the assemblies will not be damaged during handling, transporting and shipping. The bearings shall be held together with removable restraints so sliding surfaces are not damaged.

Centerlines shall be marked on both top and base plates for alignment in the field. The bearings shall be shipped in moisture-proof and dust-proof covers.

Performance Testing. The following performance tests are required. All tests shall be performed by the manufacturer prior to shipment. Where lot testing is permitted, a lot size shall be the number of bearings per type on the project but not to exceed 25 bearings per type.

Dimension Check. Each bearing shall be checked dimensionally to verify all bearing components are within tolerances. Failure to satisfy any dimensional tolerance shall be grounds for rejecting the bearing component or the entire bearing assembly.

Clearance Test. This test shall be performed on one bearing per lot. The bearing selected for this test shall be the one with the least amount of clearance based on the dimension check. The bearing assembly shall be loaded to its service limit state rated capacity at its full design rotation but not less than 0.02 radians to verify the required clearances exist. This test shall be performed twice for each bearing with the rotation oriented longitudinally with the bridge once in each direction. Any visual signs of rubbing or binding shall be grounds for rejection of the lot.

Proof Load Test. This test shall be performed on one bearing per lot. The bearing assembly shall be load tested to 150 percent of the service limit state rated capacity at a rotation of 0.02 radians. The load shall be maintained for 5 minutes, removed then reapplied for 5 minutes. If the load drops below the required value during either application, the test shall be restarted from the beginning. This test shall be performed twice for each bearing with the rotation oriented longitudinally with the bridge once in each direction.

The bearing shall be visually examined both during the test and upon disassembly after the test. Any resultant visual defects include, but are not limited to:

1. Extruded or deformed elastomer, polyether urethane, or PTFE.
2. Insufficient clearances such as evidence of metal to metal contact between the pot wall and the top plate.
3. Damaged components such as cracked steel, damaged seal rings, or damaged limiting rings.
4. Bond failure.

If any of the above items are found it shall be grounds for rejection of the lot.

Sliding Friction Test. For expansion bearings, this test shall be performed on one bearing per lot. The sliding surfaces shall be thoroughly cleaned with a degreasing solvent. No lubrication other than that specified for the bearing shall be used. The bearing shall be loaded to its service limit state rated capacity for 1 hour prior to and throughout the duration of the sliding test. At least 12 cycles of plus and minus sliding with an amplitude equaling the smaller of the design displacement and 1 inch (25 mm) shall then be applied. The average sliding speed shall be between 0.1 inch and 1.0 inches (2.5 mm and 25 mm) per minute. The sliding friction coefficient shall be computed for each direction of each cycle and its mean and standard deviation shall be computed for the sixth through twelfth cycles.

The friction coefficient for the first movement and the mean plus two standard deviations for the sixth through twelfth cycles shall not exceed the design value used. In addition, the mean value for the sixth through twelfth cycles shall not exceed $2/3$ of the design value used. Failure of either of these shall result in rejection of the lot.

The bearing shall also be visually examined both during and after the testing, any resultant defects, such as bond failure, physical destruction, or cold flow of the PTFE shall also be cause for rejection of the lot.

The Contractor shall furnish to the Department a notarized certification from the bearing manufacturer stating the HLMR bearings have been performance tested as specified. The Contractor shall also furnish to the Engineer of Tests at the Bureau of Materials and Physical Research (126 East Ash Springfield, IL 62704) a purchase order prior to fabrication. The purchase order shall contain, as a minimum, the quantity and size of each type of bearing furnished. The Department reserves the right to perform any of the specified tests on one or more of the furnished bearings. If the tested bearing shows failure it shall be replaced and the remaining bearings shall be similarly tested for acceptance at the Contractor's expense.

When directed by the Engineer, the manufacturer shall furnish an additional bearing assembly and/or random samples of component materials used in the bearings, for testing by the Department, according to Article 1083.04 of the Standard Specifications.

Installation. The HLMR bearings shall be erected according to Article 521.05 of the Standard Specifications.

Exposed edges and other exposed portions of the structural steel plates shall be field painted as specified for Structural Steel.

Basis of Payment. This work will be paid for at the contract unit price each for HIGH LOAD MULTI-ROTATIONAL BEARINGS, FIXED; HIGH LOAD MULTI-ROTATIONAL BEARINGS, GUIDED EXPANSION; or HIGH LOAD MULTI-ROTATIONAL BEARINGS, NON-GUIDED EXPANSION of the load rating specified.

When the fabrication and erection of HLMR bearings is accomplished under separate contracts, the applicable requirements of Article 505.09 shall apply.

Fabricated HLMR bearings and other materials complying with the requirements of this item, furnished and accepted, will be paid for at the contract unit price each for FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, FIXED, FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, GUIDED EXPANSION or FURNISHING HIGH LOAD MULTI-ROTATIONAL BEARINGS, NON-GUIDED EXPANSION of the load rating specified.

Storage and care of fabricated HLMR bearings and other materials complying with the requirements of this item by the Fabrication Contractor beyond the specified storage period, will be paid for at the contract unit price per calendar day for STORAGE OF HIGH LOAD MULTI-ROTATIONAL BEARINGS if a pay item is provided for in the contract, or will be paid for according to Article 109.04 if a pay item is not provided in the contract.

HLMR bearings and other materials fabricated under this item erected according to the requirements of the specifications, and accepted, will be paid for at the contract unit price each for ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, FIXED, ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, GUIDED EXPANSION or ERECTING HIGH LOAD MULTI-ROTATIONAL BEARINGS, NON-GUIDED EXPANSION of the load rating specified.

TEMPORARY SHEET PILING

Effective: September 2, 1994

Revised: January 31, 2012

Description. This work shall consist of furnishing, driving, adjusting for stage construction when required and subsequent removal of the sheet piling according to the dimensions and details shown on the plans and according to the applicable portions of Section 512 of the Standard Specifications.

This work shall also include furnishing, installing and subsequent removal of all miscellaneous steel shapes, plates and connecting hardware when required to attach the sheeting to an existing substructure unit and/or to facilitate stage construction.

General. The Contractor may propose other means of supporting the sides of the excavation provided they are done so at no extra cost to the department. If the Contractor elects to vary from the design requirements shown on the plans, the revised design calculations and details shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

Material. The sheet piling shall be made of steel and may be new or used material, at the option of the Contractor. The sheet piling shall have a minimum section modulus as shown on the plans or in the approved Contractor's alternate design. The sheeting shall have a minimum yield strength of 38.5 ksi (265 MPa) unless otherwise specified. The sheeting, used by the Contractor, shall be identifiable and in good condition free of bends and other structural defects. The Contractor shall furnish a copy of the published sheet pile section properties to the Engineer for verification purposes. The Engineer's approval will be required prior to driving any sheeting. All driven sheeting not approved by the Engineer shall be removed at the Contractor's expense.

Construction. The Contractor shall verify locations of all underground utilities before driving any sheet piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The Contractor shall be responsible for determining the appropriate equipment necessary to drive the sheeting to the tip elevation(s) specified on the plans or according to the Contractor's approved design. The sheet piling shall be driven, as a minimum, to the tip elevation(s) specified, prior to commencing any related excavation. If unable to reach the minimum tip elevation, the adequacy of the sheet piling design will require re-evaluation by the Department prior to allowing excavation adjacent to the sheet piling in question. The Contractor shall not excavate below the maximum excavation line shown on the plans without the prior permission of the Engineer. The sheet piling shall remain in place until the Engineer determines it is no longer required.

The sheet piling shall be removed and disposed of by the Contractor when directed by the Engineer. When allowed, the Contractor may elect to cut off a portion of the sheet piling leaving the remainder in place. The remaining sheet piling shall be a minimum of 12 in. (300 mm) below

the finished grade or as directed by the Engineer. Removed sheet piling shall become the property of the Contractor.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) where it's presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven through or around with normal driving procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

Method of Measurement. The temporary sheet piling will be measured for payment in place in square feet (square meter). Any temporary sheet piling cut off, left in place, or driven to dimensions other than those shown on the contract plans without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's expense.

If the Contractor is unable to drive the sheeting to the specified tip elevation(s) and can demonstrate that any further effort to drive it would only result in damaging the sheeting, then the Contractor shall be paid based on the plan quantity of temporary sheeting involved. However, no additional payment will be made for any walers, bracing, or other supplement to the temporary sheet piling, which may be required as a result of the re-evaluation in order to insure the original design intent was met. Portions of the temporary sheet piling left in place for reuse in later stages of construction shall only be measured for payment once.

Basis of Payment. This work will be paid for at the contract unit price per square foot (square meter) for TEMPORARY SHEET PILING.

Payment for any excavation performed in conjunction with this work will not be included in this item but shall be paid for as specified elsewhere in this contract.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

MECHANICALLY STABILIZED EARTH RETAINING WALLS

Effective: February 3, 1999

Revised: April 18, 2014

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

Vist-A-Wall Systems, LLC: Vist-A-Wall

Tensor 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 A1064, ASTM A 1011 or ASTM A 463 Grade 50 (345). The steel reinforcement 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 A1064 or ASTM A 706 Grade 60 (420)
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 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) or 1006.10(b)(1) except the welded wire fabric shall be epoxy coated according to ASTM A884.
 - (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 and aluminizing shall be assumed to 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 Illinois Modified 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.

Fill placed within the foot print of the reinforced soil mass, above the top layer of soil reinforcement and below the bottom of the subgrade or top soil, shall be included in the cost of the MSE wall.

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.

BRIDGE DECK CONSTRUCTION

Effective: October 22, 2013

Revised: April 18, 2014

Revise the Second Paragraph of Article 503.06(b) to read as follows.

“When the Contractor uses cantilever forming brackets on exterior beams or girders, additional requirements shall be as follows.”

Revise Article 503.06(b)(1) to read as follows.

“(1) Bracket Placement. The spacing of brackets shall be per the manufacturer's published design specifications for the size of the overhang and the construction loads anticipated. The resulting force of the leg brace of the cantilever bracket shall bear on the web within 6 inches (150 mm) of the bottom flange of the beam or girder.”

Revise Article 503.06(b)(2) to read as follows.

“(2) Beam Ties. The top flange of exterior steel beams or girders supporting the cantilever forming brackets shall be tied to the bottom flange of the next interior beam. The top flange of exterior concrete beams supporting the cantilever forming brackets shall be tied to the top flange of the next interior beam. The ties shall be spaced at 4 ft (1.2 m) centers. Permanent cross frames on steel girders may be considered a tie. Ties shall be a minimum of 1/2 inch (13 mm) diameter threaded rod with an adjusting mechanism for drawing the tie taut. The ties shall utilize hanger brackets or clips which hook onto the flange of steel beams. No welding will be permitted to the structural steel or stud shear connectors, or to reinforcement bars of concrete beams, for the installation of the tie bar system. After installation of the ties and blocking, the tie shall be drawn taut until the tie does not vary from a straight line from beam to beam. The tie system shall be approved by the Engineer.”

Revise Article 503.06(b)(3) to read as follows.

“(3) Beam Blocks. Suitable beam blocks of 4 in x 4 in (100 x 100 mm) timbers or metal structural shapes of equivalent strength or better, acceptable to the Engineer, shall be wedged between the webs of the two beams tied together, within 6 inches (150 mm) of the bottom flange at each location where they are tied. When it is not feasible to have the resulting force from the leg brace of the cantilever brackets transmitted to the web within 6 inches (150 mm) of the bottom flange, then additional blocking shall be placed at each bracket to transmit the resulting force to within 6 inches (150 mm) of the bottom flange of the next interior beam or girder.”

Delete the last paragraph of Article 503.06(b).

Revise the third paragraph of Article 503.16 to read as follows.

“Fogging equipment shall be in operation unless the evaporation rate is less than 0.1 lb/sq ft/hour (0.5kg/sq m/hour) and the Engineer gives permission to stop. The evaporation rate shall be determined according to the following formula.

$$E = (T_c^{2.5} - rT_a^{2.5})(1 + 0.4V)x10^{-6} \text{ (English)}$$

$$E = 5[(T_c + 18)^{2.5} - r(T_a + 18)^{2.5}](V + 4)x10^{-6} \text{ (Metric)}$$

Where:

E = Evaporation Rate, lb/ft²/h (kg/sq m/h)

T_c = Concrete Temperature, °F (°C)

T_a = Air Temperature, °F (°C)

r = Relative Humidity in percent/100

V = Wind Velocity, mph (km/h)

The Contractor shall provide temperature, relative humidity, and wind speed measuring equipment. Fogging equipment shall be adequate to reach or cover the entire pour from behind the finishing machine or vibrating screed to the point of curing covering application, and shall be operated in a manner which shall not accumulate water on the deck until the curing covering has been placed.”

Revise the third paragraph of Article 503.16(a)(1) to read as follows.

“At the Contractor’s option, a vibrating screed may be used in lieu of a finishing machine for superstructures with a pour width less than or equal to 24 ft (7.3 m). After the concrete is placed and consolidated, it shall be struck off with a vibrating screed allowing for camber, if required. The vibrating screed shall be of a type approved by the Engineer. A slight excess of concrete shall be kept in front of the cutting edge at all times during the striking off operation. After screeding, the entire surface shall be finished with hand-operated longitudinal floats having blades not less than 10 ft (3 m) in length and 6 in. (150 mm) in width. Decks so finished need not be straightedge tested as specified in 503.16(a)(2).”

Delete the fifth paragraph of 503.16(a)(1).

Revise Article 503.16(a)(2) to read as follows.

“(2) Straightedge Testing and Surface Correction. After the finishing has been completed and while the concrete is still plastic, the surface shall be tested for trueness with a 10 ft (3 m) straightedge, or a hand-operated longitudinal float having blades not less than 10 ft (3 m) in length and 6 in. (150 mm) in width. The Contractor shall furnish and use an accurate 10 ft (3 m) straightedge or float which has a handle not less than 3 ft (1 m) longer than 1/2 the pour width. The straightedge or float shall be held in contact with the surface and passed gradually from one side of the superstructure to the other. Advance along the surface

shall be in successive stages of not more than 1/2 the length of the straightedge or float. Any depressions found shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished.”

Replace the second sentence of the first paragraph of Article 1020.13(a)(5) with the following sentences.

“Cotton mats in poor condition will not be allowed. The cotton mats shall be placed in a manner which will not create indentations greater than 1/4 inch (6 mm) in the concrete surface. Minor marring of the surface is tolerable and is secondary to the importance of timely curing.”

Revise Article 1020.14(b) to read as follows.

“(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.

(1) Bridge Deck Concrete. For concrete in bridge decks, slabs, and bridge approach slabs the Contractor shall schedule placing and finishing of the concrete during hours in which the ambient air temperature is forecast to be lower than 85 °F (30 °C). It shall be understood this may require scheduling the deck pour at night in order to utilize the temperature window available. The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 85 °F (30 °C).

(2) Non-Bridge Deck Concrete. Except as noted above, 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 restrictions above shall be considered at point of placement. 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 by the Contractor to offset anticipated heat loss, but in no case shall the maximum concrete temperature be permitted to exceed the limits stated in this Article.”

Revise Article 1103.13(a) to read as follows.

“(a) Bridge Deck. The finishing machine shall be equipped with: (1) a mechanical strike off device; (2) either a rotating cylinder(s) or a longitudinal oscillating screed which transversely finishes the surface of the concrete. The Contractor may attach other equipment to the finishing machine to enhance the final finish when approved by the Engineer. The finishing machine shall produce a deck surface of uniform texture, free from porous areas, and with the required surface smoothness.

The finishing machine shall be operated on rails or other supports that will not deflect under the applied loads. The maximum length of rail segments supported on top of beams and within the pour shall be 10 ft (3 m). The supports shall be adjustable for elevation and shall be completely in place to allow the finishing machine to be used for the full length of the area to be finished. The supports shall be approved by the Engineer before placing of the concrete is started.”

Revise Article 1103.17(k) to read as follows.

“(k) Fogging Equipment. Fogging equipment shall be hand held fogging equipment for humidity control. The equipment shall be capable of atomizing water to produce a fog blanket by the use of pressure 2500 psi minimum (17.24 MPa) and an industrial fire hose fogging nozzle or equivalent. Fogging equipment attached to the finishing machine will not be permitted.”

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If

the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color,

religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. Davis-Bacon and Related Act Provisions

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such

action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for

debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such

contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded,"

as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with

commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the

certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.