Bid Submittal Guidelines and Checklist

In effort to eliminate confusion and to standardize the bid submission process the Contracts Unit of the Division of Highways has created the following standard guidelines and checklist for submitting bids at all IDOT lettings.

This information has been compiled from questions received from contractors and from inconsistencies noted on bids received at the bid openings. If you have additional questions please refer to the contact information listed below.

Questions: pre-letting up to execution of the contract

Contractor/Subcontractor pre-qualification	217-782-3413
Small Business, Disadvantaged Business Enterprise (DBE)	217-785-4611
Contracts, Bids, Letting process or Internet downloads	217-785-0230
Estimates Unit	217-785-3483

Questions: following contract execution

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

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. This page has the Item number 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 submitted only if you are awarded the contract.
- 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 accepted if it is delivered after 10 AM.
- Do not submit your Substance Abuse Prevention Program (SAPP) with your bid. This form is to be submitted to the district engineer at the pre-construction conference if you are awarded the contract.

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

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

If you are the apparent low-bidder, there is nothing further for you to do until the contract is officially awarded to your company. If your bid is not within the engineer's estimate it does not mean that the bid will be rejected. The award or rejection of the bids that are not within the engineer's estimate will be determined at the Awards Meeting. The Awards Meeting is usually held approximately two weeks after the letting. The responsive and responsible low-bidders of those contracts recommended for award will be notified by mail.

Use the following checklist to assure completeness and the correct order in assembling your bid

☐ **Cover page followed by the Pay Items.** If you are using special software or a CBID to generate your schedule of prices, do not include the blank schedule of prices.

☐ **Page 4 (Item 9)** – Check "Yes" if you will use a subcontractor. Include the subcontractor name, address and the dollar amount (if over $25,000). 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 your Cost Adjustments for Steel, Bituminous and Fuel (if applicable), and your State Board of Elections Business Registration (if applicable).

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

☐ **Page 10 (Paragraph K)** – list the Union Local Name and number or certified training programs that you have in place. Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.

☐ **Page 11 (Paragraph L)** Insert a copy of your State Board of Elections Business Registration after page 4 of the bid proposal. Only include the page that has the date stamp on it. Do not include any other certificates or forms showing that you are an Illinois business.

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

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

☐ **Pages 14-17 (Form A)** – One Form A (4 pages) is required for each applicable person in your company. Copies of the Forms can be used and only need to be changed when the financial information changes. The certification signature and date must be original for each letting. Do not staple the forms together.

If you are not required to submit Form A; 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)** This Form is for disclosing active and pending contracts with agencies *other than* IDOT. The Department already has your company Affidavit of Availability (BC 57) on file showing all current and pending IDOT contracts. Do not attach or reference the BC 57 on Form B. If you check YES to having other current or pending contracts outside of IDOT; list the agency followed by the contract number on the form or reference an additional information sheet and insert it after the form.

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

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

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

If you plan to submit a bid directly to the Department of Transportation

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 that 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.

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. This does not apply to Small Business Set-Asides.

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. This does not apply to Small Business Set-Asides.

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 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 form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. 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 contractor'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 will be placed with the contract number. 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 server e-mails 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 Plans and Contracts Office at (217)782-7806 or D&Econtracts@dot.il.gov

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

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	**Call**
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of plans and proposals	217/782-7806

ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS

Bidders should verify that they have received and incorporated any addendum and/or revision prior to submitting their bid. Failure by the bidder to include an addendum or revision could result in a bid being rejected as irregular.

RETURN WITH BID

Proposal Submitted By
Name
Address
City

94

Letting August 5, 2011

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL
(See instructions inside front cover)

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. This does not apply to Small Business Set-Asides.
(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

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

Illinois Department of Transportation

Springfield, Illinois 62764

Contract No. 91461
MCLEAN County
Section 10-00243-02-LS (Normal)
Route BEAUFORT STREET
Project TE-00D5(096)
District 5 Construction Funds

PLEASE MARK THE APPROPRIATE BOX BELOW:

☐ A Bid Bond is included.

☐ A Cashier's Check or a Certified Check is included

Prepared by

F

Checked by

(Printed by authority of the State of Illinois)

INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond. In addition, this proposal contains new statutory requirements applicable to the use of subcontractors and, in particular, includes the State Required Ethical Standards Governing Subcontractors to be signed and incorporated into all subcontracts.

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. To request authorization, a potential bidder must complete and submit Part B of the Request for Authorization to Bid/or Not For Bid Status form (BDE 124) and submit an original Affidavit of Availability (BC 57). This does not apply to Small Business Set-Asides.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "**Authorization to Bid or Not for Bid**" form, 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 a **Authorization to Bid or Not for Bid Report**, approved by the Central Bureau of Construction, 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. If a contractor has requested to bid but has not received a **Authorization to Bid or Not for Bid Report**, they should contact the Central Bureau of Construction in advance of the letting date.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond

2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	Call
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806

RETURN WITH BID

Illinois Department of Transportation

PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

_____

Taxpayer Identification Number (Mandatory) _____

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

Contract No. 91461
MCLEAN County
Section 10-00243-02-LS (Normal)
Project TE-00D5(096)
Route BEAUFORT STREET
District 5 Construction Funds

Project consists of the removal of pavement and sidewalks, construction of PCC sidewalks and paver sidewalks, retaining walls, landscaping and pedestrian lighting, from Broadway Avenue to the circular intersection in uptown Normal.

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

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

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

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

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

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

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

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

Attach Cashier's Check or Certified Check Here

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

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

Section No. _____

County _____

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

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid Dollars	Cents

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

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

9. **The services of a subcontractor will or may be used.**

Check box Yes ☐
Check box No ☐

For known subcontractors with subcontracts with an annual value of more than $25,000, the contract shall include their name, address, and the dollar allocation for each subcontractor.

_____

_____

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

STATE JOB #- C-95-322-11
PPS NBR - 0-00992-0000

SCHEDULE OF PRICES
CONTRACT NUMBER - 91461

RUN DATE - 06/23/11
RUN TIME - 190102

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
MCLEAN	113	05	10-00243-02-LS(NORMAL)	TE-00D5/096/000	BEAUFORT STREET

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
K0012990	P PL ORNAMENT T GAL P	UNIT	8.210	X			=		
K0012995	P PL ORNAMENT T 5G P	UNIT	0.490	X			=		
K1003455	LANDSCAPE FILL SOIL	CU YD	219.000	X			=		
K1005481	SHRED BARK MULCH 3	SQ YD	130.000	X			=		
XX000300	CONCRETE STEPS	SQ FT	467.000	X			=		
XX001244	RETAINING WALL	FOOT	153.000	X			=		
XX003219	UNIT PAVERS	SQ FT	5,470.000	X			=		
XX003885	IRRIGATION SYSTEM	L SUM	1.000	X			=		
XX003995	INTER LOCK CONC PAVER	SQ FT	4,364.000	X			=		
XX005022	LANDSCAPING PLANTERS	L SUM	1.000	X			=		
XX005735	PLANTER CURB	FOOT	32.000	X			=		
XX006188	REM RE-E SEG BLK RETW	SQ FT	160.000	X			=		
XX006570	TREES (SPECIAL)	EACH	10.000	X			=		
XX006677	TREE WELL	EACH	158.000	X			=		
XX006901	TREE GRATE ASSEM COMP	EACH	8.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
XX007469	UPLIGHTS	EACH	3.000	X			=		
XX007857	TRASH RECEPTACLE F&I	EACH	1.000	X			=		
XX007860	AGG BASE CSE SPL	SQ YD	485.000	X			=		
XX008159	PCC BAND PAVER BRICKS	FOOT	1,211.000	X			=		
XX008207	LIGHTS PEDESTRIAN	EACH	15.000	X			=		
XX008553	RETAINING WALL SPL	FOOT	54.000	X			=		
XX008554	CONC SEATWALL BENCH	L SUM	1.000	X			=		
X0321766	LT POLE SPL DEC ORN	EACH	1.000	X			=		
X0323407	FLAG POLES	EACH	1.000	X			=		
X0323950	LUM MET HALIDE 175W	EACH	1.000	X			=		
X0325586	MOW STRIP	SQ YD	8.000	X			=		
X0327066	IG FIX UPLIGHTING	EACH	16.000	X			=		
X2110100	TOPSOIL F & P SPL	CU YD	392.000	X			=		
X6023508	INLETS TA W/SPL F&G	EACH	2.000	X			=		
X6024503	INLET ADJ NEW F&G SPL	EACH	4.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
X7010216	TRAF CONT & PROT SPL	L SUM	1.000	X			=		
X8360120	LIGHT POLE FDN SPL	EACH	1.000	X			=		
X8950130	MOD EX LTG CONTROLLER	EACH	1.000	X			=		
X8950205	REBLD EX HANDHOLE SPL	EACH	1.000	X			=		
Z0003855	BICYCLE RACKS	EACH	6.000	X			=		
Z0004002	BOLLARDS	EACH	29.000	X			=		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000	X			=		
Z0048665	RR PROT LIABILITY INS	L SUM	1.000	X			=		
Z0050600	REM RESET ORN FENCE	FOOT	110.000	X			=		
20100110	TREE REMOV 6-15	UNIT	6.000	X			=		
20101000	TEMPORARY FENCE	FOOT	1,000.000	X			=		
20200100	EARTH EXCAVATION	CU YD	1,400.000	X			=		
20201200	REM & DISP UNS MATL	CU YD	140.000	X			=		
21000300	GRAN EMBANK SPEC	TON	287.000	X			=		
25200110	SODDING SALT TOLERANT	SQ YD	426.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
25200200	SUPPLE WATERING	UNIT	7.000	X			=		
28000400	PERIMETER EROS BAR	FOOT	200.000	X			=		
28000510	INLET FILTERS	EACH	19.000	X			=		
35101800	AGG BASE CSE B 6	SQ YD	1,493.000	X			=		
40201000	AGGREGATE-TEMP ACCESS	TON	20.000	X			=		
40800050	INCIDENTAL HMA SURF	TON	24.000	X			=		
42400300	PC CONC SIDEWALK 6	SQ FT	7,966.000	X			=		
44000100	PAVEMENT REM	SQ YD	622.000	X			=		
44000300	CURB REM	FOOT	230.000	X			=		
44000600	SIDEWALK REM	SQ FT	5,426.000	X			=		
50901760	PIPE HANDRAIL	FOOT	66.000	X			=		
60100915	PIPE DRAINS 6	FOOT	35.000	X			=		
60107700	PIPE UNDERDRAINS 6	FOOT	642.000	X			=		
60255500	MAN ADJUST	EACH	6.000	X			=		
60257900	MAN RECONST	EACH	1.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
60600505	CONC CURB SPL	FOOT	106.000			X =		
67100100	MOBILIZATION	L SUM	1.000			X =		
81012100	CON T 1/2 PVC	FOOT	925.000			X =		
81012200	CON T 3/4 PVC	FOOT	370.000			X =		
81013200	CON T 6 PVC	FOOT	250.000			X =		
81200198	CON EMB STR 1/2 PVC	FOOT	150.000			X =		
81702100	EC C XLP USE 1C 12	FOOT	1,930.000			X =		
81702101	EC C XLP USE 1C 14	FOOT	130.000			X =		
81702110	EC C XLP USE 1C 10	FOOT	175.000			X =		
81900302	TR & BKFIL W SCR/SAND	FOOT	1,545.000			X =		

TOTAL $

NOTE:

1. EACH PAY ITEM SHOULD HAVE A UNIT PRICE AND A TOTAL PRICE.

2. THE UNIT PRICE SHALL GOVERN IF NO TOTAL PRICE IS SHOWN OR IF THERE IS A DISCREPANCY BETWEEN THE PRODUCT OF THE UNIT PRICE MULTIPLIED BY THE QUANTITY.

3. IF A UNIT PRICE IS OMITTED, THE TOTAL PRICE WILL BE DIVIDED BY THE QUANTITY IN ORDER TO ESTABLISH A UNIT PRICE.

4. A BID MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN.

RETURN WITH BID

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

I. GENERAL

A. Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, 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 chief procurement officer to void the contract, or subcontract, and may result in the suspension or debarment of the bidder or subcontractor.

II. ASSURANCES

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

A. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

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

B. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

C. Inducements

1. The Illinois Procurement Code provides:

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

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

D. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

Section 50-30. Revolving door prohibition. Chief procurement officers, State purchasing officers, procurement compliance monitors, their designees whose principal duties are directly related to State procurement, and executive officers confirmed by the Senate are expressly prohibited for a period of 2 years after terminating an affected position from engaging in any procurement activity relating to the State agency most recently employing them in an affected position for a period of at least 6 months. The prohibition includes, but is not limited to: lobbying the procurement process; specifying; bidding; proposing bid, proposal, or contract documents; on their own behalf or on behalf of any firm, partnership, association, or corporation. This Section applies only to persons who terminate an affected position on or after January 15, 1999.

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

E. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, 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 chief procurement officer.

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

F. Confidentiality

1. The Illinois Procurement Code provides:

Section 50-45. Confidentiality. Any chief procurement officer, State purchasing officer, designee, or executive officer who willfully uses or allows the use of specifications, competitive bid documents, proprietary competitive information, proposals, contracts, or selection information to compromise the fairness or integrity of the procurement, bidding, or contract process shall be subject to immediate dismissal, regardless of the Personnel code, any contract, or any collective bargaining agreement, and may in addition be subject to criminal prosecution.

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

G. Insider Information

1. The Illinois Procurement Act provides:

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

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

III. CERTIFICATIONS

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. Section 50-2 of the Illinois Procurement 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 chief procurement officer whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

A. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

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

(d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the Procurement 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 chief procurement officer may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

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

B. Felons

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

3. Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement 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 chief procurement officer may declare the related contract void if any of the certifications required by this Section are false.

C. Debt Delinquency

1. The Illinois Procurement Code provides:

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

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the Procurement 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 chief procurement officer may declare the related contract void if this certification is false or if the bidder, contractor, or subcontractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

D. Prohibited Bidders, Contractors and Subcontractors

1. The Illinois Procurement Code provides:

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.
The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement 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 chief procurement officer shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-12 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Procurement 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 chief procurement officer may declare the contract void if this certification is false.

F. Educational Loan

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

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

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

G. Bid-Rigging/Bid Rotating

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

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

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

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

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

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

H. International Anti-Boycott

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

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

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

I. Drug Free Workplace

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

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

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

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

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

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

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

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

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

J. Disclosure of Business Operations in Iran

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

(1) More than 10% of the Company's revenues produced in or assets located in Iran involve oil-related activities or mineral-extraction activities; less than 75% of the Company's revenues produced in or assets located in Iran involve contracts with or provision of oil-related or mineral-extraction products or services to the Government of Iran or a project or consortium created exclusively by that government; and the Company has failed to take substantial action.

(2) The Company has, on or after August 5, 1996, made an investment of $20 million or more, or any combination of investments of at least $10 million each that in the aggregate equals or exceeds $20 million in any 12-month period, which directly or significantly contributes to the enhancement of Iran's ability to develop petroleum resources of Iran.

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

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

Check the appropriate statement:

/___/ Company has no business operations in Iran to disclose.

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

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

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

NA-FEDERAL

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

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

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

The undersigned business entity certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. A copy of the certificate of registration shall be submitted with the bid. The bidder is cautioned that the Department will not award a contract without submission of the certificate of registration.

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

M. Lobbyist Disclosure

Section 50-38 of the Illinois Procurement 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 chief procurement officer 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 Procurement 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: _____

_____

_____

_____

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 chief procurement officer 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 Procurement Code. Furthermore, the chief procurement officer 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 Illinois Procurement 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 Procurement 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 400 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. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **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 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

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

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

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

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

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

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

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

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

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A
Financial Information & Potential Conflicts of Interest Disclosure

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

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

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

DISCLOSURE OF FINANCIAL INFORMATION

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

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

_____

Type of ownership/distributable income share:

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

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

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

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

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

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

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

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

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

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

Yes ___No __

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___No __

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

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 71/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess 100% of the annual salary of the Governor? Yes ___ No __

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

Yes ___ No __

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

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

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

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

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

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

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

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

---

3. Communication Disclosure.

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

Name and address of person(s): _____

_____

_____

_____

RETURN WITH BID

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

Name of person(s): _____

Nature of disclosure: _____

_____

_____

_____

APPLICABLE STATEMENT

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

Completed by: ☐ _____ _____

Signature of Individual or Authorized Representative — Date

NOT APPLICABLE STATEMENT

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

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

☐ _____ _____

Signature of Authorized Representative — Date

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Other Contracts & Procurement 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 Illinois Procurement Act (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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

(a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.

(b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.

(c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

RETURN WITH BID

Illinois Department of Transportation

Contract No. 91461
MCLEAN County
Section 10-00243-02-LS (Normal)
Project TE-00D5(096)
Route BEAUFORT STREET
District 5 Construction Funds

PART I. IDENTIFICATION

Dept. Human Rights # _____ Duration of Project: _____

Name of Bidder: _____

PART II. WORKFORCE PROJECTION

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

TABLE A

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

TABLE C

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

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

FOR DEPARTMENT USE ONLY

BC 1256 (Rev. 12/11/08)

Note: See instructions on page 2

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. 91461
MCLEAN County
Section 10-00243-02-LS (Normal)
Project TE-00D5(096)
Route BEAUFORT STREET
District 5 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.

Firm Name _____

(IF AN INDIVIDUAL) Signature of Owner _____

Business Address _____

_____

Firm Name _____

By _____

(IF A CO-PARTNERSHIP) Business Address _____

_____
Name and Address of All Members of the Firm:

_____ _____

Corporate Name _____

By _____
Signature of Authorized Representative

(IF A CORPORATION)

_____
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 _____

Corporate Name _____

By _____
Signature of Authorized Representative

(IF A JOINT VENTURE)

_____
Typed or printed name and title of Authorized Representative

Attest _____
Signature

Business Address _____

_____

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

Illinois Department of Transportation

Return with Bid

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

Item No. _____

Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

_____

as PRINCIPAL, and _____

_____ as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of invitation for bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

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

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

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

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by

their respective officers this _____ day of _____ A.D., _____ .

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

Notary Certification for Principal and Surety

STATE OF ILLINOIS,

County of _____

I, _____ , a Notary Public in and for said County, do hereby certify that

_____ and _____

(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

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

Given under my hand and notarial seal this _____ day of _____ A.D. _____

My commission expires _____ _____

Notary Public

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

_____ _____ ☐ _____

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

Illinois Department of Transportation

DBE Utilization Plan

(1) Policy

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

(2) Obligation

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

(3) Project and Bid Identification

Complete the following information concerning the project and bid:

Route _____ Total Bid _____

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

Project _____

County _____

Letting Date _____

Contract No. _____

Letting Item No. _____

(4) Assurance

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

☐ Meets or exceeds contract award goals and has provided documented participation as follows:

Disadvantaged Business Participation _____ percent

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

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

Disadvantaged Business Participation _____ percent

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

_____
Company

By _____

Title _____

Date _____

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

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

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

Local Let Projects
Submit forms to the
Local Agency

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

Illinois Department of Transportation

DBE Participation Statement

Subcontractor Registration _____ Letting _____

Participation Statement Item No. _____

(1) Instructions Contract _____

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

(2) Work

Pay Item No.	Description	Quantity	Unit Price	Total
			Total	

(3) Partial Payment Items

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

(4) Commitment

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

_____ _____

Signature for Prime Contractor Signature for DBE Firm

Title _____ Title _____

Date _____ Date _____

Contact _____ Contact Person _____

Phone _____ Phone _____

Firm Name _____ Firm Name _____

Address _____ Address _____

City/State/Zip _____ City/State/Zip _____

E _____

WC _____

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

PROPOSAL ENVELOPE

Illinois Department of Transportation

PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

Engineer of Design and Environment - Room 326
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

NOTICE

Individual bids, including Bid Bond and/or supplemental information if required, should be securely stapled.

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

None of the following material needs to be returned with the bid package unless the special provisions require documentation and/or other information to be submitted.

Contract No. 91461
MCLEAN County
Section 10-00243-02-LS (Normal)
Project TE-00D5(096)
Route BEAUFORT STREET
District 5 Construction Funds

Illinois Department of Transportation

SUBCONTRACTOR DOCUMENTATION

Public Acts 96-0795 and 96-0920, enacted substantial changes to the provisions of the Illinois Procurement 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 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 Chief Procurement Officer within 20 calendar days after execution of the subcontract.

The subcontract shall contain the certifications required to be made by subcontractors pursuant to Article 50 of the Illinois Procurement 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 Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, 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 chief procurement officer may terminate or void the subcontract approval if it is later determined that the bidder or subcontractor rendered a false or erroneous certification.

Section 50-2 of the Illinois Procurement 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 chief procurement officer whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

A. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract to which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

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

(d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the Procurement 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 chief procurement officer may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

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

B. Felons

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

2. Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement 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 chief procurement officer may declare the related contract void if any of the certifications required by this Section are false.

RETURN WITH SUBCONTRACT

C. Debt Delinquency

1. The Illinois Procurement Code provides:

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

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the Procurement 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 chief procurement officer may declare the related contract void if this certification is false or if the bidder, contractor, or subcontractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

D. Prohibited Bidders, Contractors and Subcontractors

1. The Illinois Procurement Code provides:

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.
The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction.. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement 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 chief procurement officer shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-12 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Procurement 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 chief procurement officer may declare the contract void if this certification is false.

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

_____
Name of Subcontracting Company

_____ _____
Authorized Officer Date

RETURN WITH SUBCONTRACT

SUBCONTRACTOR DISCLOSURES

I. DISCLOSURES

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

The chief procurement officer 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 Procurement Code. Furthermore, the chief procurement officer may void the contract or subcontract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all subcontracts with a total value of $25,000 or more, from subcontractors identified in Section 20-120 of the Illinois Procurement 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 400 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. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies.

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

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

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

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement 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 $25,000 or more, from subcontractors identified in Section 20-120 of the Illinois Procurement Code, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

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

DISCLOSURE OF FINANCIAL INFORMATION

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

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

_____

Type of ownership/distributable income share:

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

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

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

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

Yes ___ No __

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

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

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

_____

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?
Yes ___No __

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

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

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___No __

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

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

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

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

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

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

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

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

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

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

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

---

3. Communication Disclosure.

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

Name and address of person(s): _____

_____

_____

_____

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

Name of person(s): _____

Nature of disclosure: _____

_____

_____

_____

APPLICABLE STATEMENT

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

Completed by: ☐ _____ _____

Signature of Individual or Authorized Officer — Date

NOT APPLICABLE STATEMENT

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

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

☐ _____ _____

Signature of Authorized Officer — Date

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Subcontractor: Other Contracts & Procurement Related Information Disclosure

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (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 $25,000 or more, from subcontractors identified in Section 20-120 of the Illinois Procurement Code, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

☐ _____ _____
Signature of Authorized Officer Date

Illinois Department of Transportation

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., August 5, 2011. 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. 91461
   MCLEAN County
   Section 10-00243-02-LS (Normal)
   Project TE-00D5(096)
   Route BEAUFORT STREET
   District 5 Construction Funds

Project consists of the removal of pavement and sidewalks, construction of PCC sidewalks and paver sidewalks, retaining walls, landscaping and pedestrian lighting, from Broadway Avenue to the circular intersection in uptown Normal.

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

   (b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.

4. **AWARD CRITERIA AND REJECTION OF BIDS**. This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Ann L. Schneider,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2011

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-07) (Revised 1-1-11)

SUPPLEMENTAL SPECIFICATIONS

RECURRING SPECIAL PROVISIONS

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

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

INDEX OF SPECIAL PROVISIONS

Title Page

INDEX LOCAL ROADS AND STREETS SPECIAL PROVISIONS

LR #	Pg #		Special Provision Title	Effective	Revised
LR SD 12		☐	Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD 13		☐	Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR SD406		☐	Safety Edge	April 1, 2011	
LR 105	180	☒	Cooperation with Utilities	Jan. 1, 1999	Jan. 1, 2007
LR 107-2		☐	Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-4	183	☒	Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-6		☐	Selection of Labor	Aug. 1, 2010	
LR 108		☐	Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 212		☐	Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		☐	Asphalt Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		☐	Asphalt Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		☐	Bituminous Treated Earth Surface	Jan. 1, 2007	Jan. 1, 2008
LR 400-2		☐	Bituminous Surface Mixture (Class B)	Jan. 1, 2008	
LR 402		☐	Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-2		☐	Bituminous Hot Mix Sand Seal Coat	Aug. 1, 1969	Jan. 1, 2007
LR 406		☐	Filling HMA Core Holes with Non-shrink Grout	Jan. 1, 2008	
LR 420		☐	PCC Pavement (Special)	May 12, 1964	Jan. 2, 2007
LR 442		☐	Bituminous Patching Mixtures for Maintenance Use	Jan. 1, 2004	Jun. 1, 2007
LR 451		☐	Crack Filling Bituminous Pavement with Fiber-Asphalt	Oct. 1, 1991	Jan. 1, 2007
LR 503-1		☐	Furnishing Class SI Concrete	Oct. 1, 1973	Jan. 1, 2002
LR 503-2		☐	Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		☐	Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		☐	Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		☐	Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1004		☐	Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		☐	Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		☐	Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1032-2		☐	Multigrade Cold Mix Asphalt	Jan. 1, 2007	Feb. 1, 2007
LR 1095		☐	Fast-Dry Pavement Marking Paint Black (Lead Free Waterborne Type)	April 1, 2011	
LR 1102		☐	Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the August 5 and September 23, 2011 Lettings

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

File Name	Pg #		Special Provision Title	Effective	Revised
80240			Above Grade Inlet Protection	July 1, 2009	
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80186	**184**	X	Alkali-Silica Reaction for Cast-in-Place Concrete	Aug. 1, 2007	Jan. 1, 2009
80213	**187**	X	Alkali-Silica Reaction for Precast and Precast Prestressed Concrete	Jan. 1, 2009	
80207	**190**	X	Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas (NOTE: This special provision was previously named *"Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders".*)	Nov. 1, 2008	Nov. 1, 2010
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	April 1, 2009
80241			Bridge Demolition Debris	July 1, 2009	
5026I			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5048I			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5049I			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5053I			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80166	**191**	X	Cement	Jan. 1, 2007	April 1, 2011
80260			Certification of Metal Fabricator	July 1, 2010	
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80094	**194**	X	Concrete Admixtures	Jan. 1, 2003	April 1, 2009
80215			Concrete Joint Sealer	Jan. 1, 2009	
80226			Concrete Mix Designs	April 1, 2009	
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	
80237	**198**	X	Construction Air Quality – Diesel Vehicle Emissions Control	April 1, 2009	July 1, 2009
80239	**200**	X	Construction Air Quality – Idling Restrictions	April 1, 2009	
80227			Determination of Thickness	April 1, 2009	
80177			Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
80029	**202**	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Jan. 1, 2011
80177			Drainage and Inlet Protection Under Traffic	April 1, 2011	
80179			Engineer's Field Office Type A	April 1, 2007	Jan. 1, 2011
80205			Engineer's Field Office Type B	Aug. 1, 2008	Jan. 1, 2011
80189	**212**	X	Equipment Rental Rates	Aug. 2, 2007	Jan. 2, 2008
80228			Flagger at Side Roads and Entrances	April 1, 2009	
80249			Frames and Grates	Jan. 1, 2010	
80265			Friction Aggregate	Jan. 1, 2011	
80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80169			High Tension Cable Median Barrier	Jan. 1, 2007	April 1, 2009
80194			HMA – Hauling on Partially Completed Full-Depth Pavement	Jan. 1, 2008	
80245			Hot-Mix Asphalt – Anti-Stripping Additive	Nov. 1, 2009	
80246			Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	
80250			Hot-Mix Asphalt – Drop-Offs	Jan. 1, 2010	
80259			Hot-Mix Asphalt – Fine Aggregate	April 1, 2010	
80109			Impact Attenuators	Nov. 1, 2003	Nov. 1, 2008
80110			Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2007
80252			Improved Subgrade	Jan. 1, 2010	
80266			Lane Closure, Multilane, Intermittent or Moving Operation, for Speeds ≤ 40 MPH	Jan. 1, 2011	Jan. 2, 2011
80230	**214**	X	Liquidated Damages	April 1, 2009	April 1, 2011
80267			Long-Span Guardrail over Culvert	Jan. 1, 2011	
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
80203	**215**	X	Metal Hardware Cast into Concrete	April 1, 2008	April 1, 2009
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010

	80253			Movable Traffic Barrier (NOTE: This Special Provision was previously named *"Moveable Traffic Barrier System".*)	Jan. 1, 2010	Jan. 1, 2011
	80262			Mulch and Erosion Control Blankets (Note: the Special Provision was previously named "Mulch")	Nov. 1, 2010	April 1, 2011
	80180			National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction	April 1, 2007	Nov. 1, 2009
	80208			Nighttime Work Zone Lighting	Nov. 1, 2008	
	80231			Pavement Marking Removal	April 1, 2009	
	80254			Pavement Patching	Jan. 1, 2010	
	80022	**216**	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
	80232			Pipe Culverts	April 1, 2009	April 1, 2010
	80263	**218**	X	Planting Perennial Plants	Jan. 1, 2011	
	80210			Portland Cement Concrete Inlay or Overlay	Nov. 1, 2008	
	80217			Post Clips for Extruded Aluminum Signs	Jan. 1, 2009	
	80268	**221**	X	Post Mounting of Signs	Jan. 1, 2011	
	80171			Precast Handling Holes	Jan. 1, 2007	
	80218			Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2009
*	80219			Preventive Maintenance – Cape Seal	Jan. 1, 2009	Aug. 1, 2011
*	80220			Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	Aug. 1, 2011
	80221			Preventive Maintenance – Slurry Seal	Jan. 1, 2009	
	80015			Public Convenience and Safety	Jan. 1, 2000	
	3426I			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
	80157	**222**	X	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
	80247			Raised Reflective Pavement Markers	Nov. 1, 2009	April 1, 2010
	80172			Reclaimed Asphalt Pavement (RAP)	Jan. 1, 2007	Jan. 1, 2011
	80224			Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	
	80271			Safety Edge	April 1, 2011	
	80131			Seeding	July 1, 2004	July 1, 2010
	80264			Selection of Labor	July 2, 2010	
	80152			Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	July 1, 2010
	80132	**223**	X	Self-Consolidating Concrete for Precast Products	July 1, 2004	July 1, 2010
	80127			Steel Cost Adjustment	April 2, 2004	April 1, 2009
*	80255			Stone Matrix Asphalt	Jan. 1, 2010	Aug. 1, 2011
	80234			Storm Sewers	April 1, 2009	April 1, 2010
	80143	**225**	X	Subcontractor Mobilization Payments	April 2, 2005	April 1, 2011
	80075			Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
	80087			Temporary Erosion Control	Nov. 1, 2002	Jan. 1, 2011
	80225			Temporary Raised Pavement Marker	Jan. 1, 2009	
	80256			Temporary Water Filled Barrier (NOTE: This special provision was previously named *"Temporary Longitudinal Traffic Barrier System".*)	Jan. 1, 2010	Jan. 1, 2011
	80257			Traffic Barrier Terminal, Type 6	Jan. 1, 2010	
*	80273	**226**	X	Traffic Control Deficiency Deduction	Aug. 1, 2011	
	80269			Traffic Control Surveillance	Jan. 1, 2011	
	20338			Training Special Provisions	Oct. 15, 1975	
	80258			Truck Mounted/Trailer Mounted Attenuators	Jan. 1, 2010	
	80270			Utility Coordination and Conflicts	April 1, 2011	
	80071			Working Days	Jan. 1, 2002	

The following special provisions have been deleted from use:

80243 American Recovery and Reinvestment Act Provisions
80236 American Recovery and Reinvestment Act Signing
81238 Monthly Employment Report

The following special provisions are in the 2011 Supplemental Specifications and Recurring Special Provisions:

File Name	Special Provision Title	New Location	Effective	Revised
80214	Concrete Gutter, Type A	Article 606.07	Jan. 1, 2009	
80178	Dowel Bars	Article 1006.11	April 1, 2007	Jan. 1, 2008
80201	Hot-Mix Asphalt – Plant Test Frequency	Article 1030.05	April 1, 2008	Jan. 1, 2010
80251	Hot-Mix Asphalt – QC/QA Acceptance Criteria	Article 1030.05	Jan. 1, 2010	
80202	Hot-Mix Asphalt – Transportation	Article 1030.08	April 1, 2008	
80196	Mast Arm Assembly and Pole	Article 1077.03	Jan. 1, 2008	Jan. 1, 2009
80182	Notification of Reduced Width	Article 701.06	April 1, 2007	
80069	Organic Zinc-Rich Paint System	Article 1008.05	Nov. 1, 2001	Jan. 1, 2010
80216	Partial Exit Ramp Closure for Freeway/Expressway	Section 701	Jan. 1, 2009	
80209	Personal Protective Equipment	Article 701.12	Nov. 1, 2008	
80119	Polyurea Pavement Marking	Sections 780, 1095 and 1105	April 1, 2004	Jan. 1, 2009
80170	Portland Cement Concrete Plants	Article 1020.11	Jan. 1, 2007	
80211	Prismatic Curb Reflectors	Articles 782.03 and 1097.04	Nov. 1, 2008	
80223	Ramp Closure for Freeway/Expressway	Section 701	Jan. 1, 2009	
80183	Reflective Sheeting on Channelizing Devices	Article 1106.02	April 1, 2007	Nov. 1, 2008
80206	Reinforcement Bars – Storage and Protection	Article 508.03	Aug. 1, 2008	April 1, 2009
80176	Thermoplastic Pavement Marking	Article 1095.01	Jan. 1, 2007	

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

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

SPECIAL PROVISIONS

The following Special Provisions supplement the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction" adopted January 1, 2007, the IDOT "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheets included herein, the IDOT "Bureau of Design and Environment Special Provisions" included herein, the IDOT "Local Roads Special Provisions and Special Details" included herein, 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 latest edition of the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois" in effect on the date of invitation for bids, and the "Manual of Practice for the Design of Public Improvements in the Town of Normal, Illinois" latest edition, which apply to and govern the construction of the Uptown Normal Gateway Plaza Improvements in the Town of Normal, McLean County, Illinois, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION AND DESCRIPTION OF WORK

The proposed improvements are located in Uptown Normal along the south side of West Beaufort Street from Broadway Avenue to the circular intersection in the Town of Normal, McLean County, Illinois.

The work under this contract shall consist of:

- Removal of the existing pavements, concrete curb and gutter, and sidewalks;
- Construction of underdrains and associated storm drainage structures;
- Construction of concrete or paver sidewalks and pavements, curb and gutter, concrete stairs and retaining walls;
- Removal of earth and various organic materials in preparation for proposed landscape plantings;
- Installation of proposed landscape plantings in planting beds or proposed concrete planters;
- Furnishing and installation of a proposed irrigation system;
- Furnishing and installation of a proposed lighting system;
- Other work necessary to complete the construction as shown in the plans and required by the specifications and special provisions.

The work shall include all labor, materials, tools and equipment necessary for the proper execution and completion of the work as shown in the plans and as specified. It shall also include all work not specifically mentioned but which is reasonably and properly inferable and necessary for the completion of the work.

COMMITMENTS

There are no special commitments for this project.

COMPLETION OF THE WORK AND CONSTRUCTION OPERATIONS

Time is an essential element of the Contract and the Engineer will be monitoring the Contractor's progress toward completion. The assessment of liquidated damages in accordance with Article 108.09 of the Standard Specifications shall be defined with respect to the following project completion dates and not the number of available calendar days or working days. The construction work for the project shall commence immediately after the notice to proceed is received by the Contractor.

Contract Time – All work to be performed under this contract, shall be completed and accepted on or before **5:00 PM, Friday, June 1, 2012**. A total of five (5) working days will be allowed beyond the June 1, 2012 completion date to complete final clean-up.

Failure to Complete Portions of the Work on Time – Should the Contractor fail to complete all work as described above, the full amount of liquidated damages per calendar day specified in Article 108.09 of the Standard Specifications will be assessed.

The liquidated damage amount specified will accrue and be assessed until final completion of all the work as described herein.

Commencement of the Work – Should the Contractor be delayed in the prosecution or completion of the work for any reason, there shall be no extension of the liquidated damages calculation, unless an extension of time is granted for completion of the work by the Engineer. No extensions of time will be allowed for increases in contract quantities or extra work unless it can be shown that such increases or extras affect the controlling item of work.

Extension of Completion Dates - Due to factors beyond the control of the Contractor the completion dates for assessment of liquidated damages shall be extended provided certain specific conditions are met. These conditions are as follows:

For Contractor Furnished (Ordered) Materials - The contractor shall provide written evidence that the critical material was ordered in a timely manner as specified in the Special Provisions. The Contractor must justify that ordered materials are necessary for the critical path and therefore, a time extension. The Town, at its discretion, may verify receipt of said order with the manufacturer.

CONTRACTOR STAGING / EMPLOYEE PARKING

Construction vehicles and equipment may be parked on City Streets provided that the said vehicles and equipment are protected by adequate traffic control devices as approved by the Engineer.

Parking of personal vehicles, not used for construction, will not be allowed within the designated construction zones. The Contractor shall make arrangements for off-site worker parking and

transportation of these employees to the worksite at his/her expense. Up to 10 parking spaces will be available in the College Avenue Parking Deck at no cost to the Contractor. If additional spaces are required within the parking deck, the Contractor will be responsible for any charges at his/her expense.

CONSTRUCTION CLEANING AND DEBRIS CONTROL

Description – In addition to the requirements of the Standard Specifications and as specified herein, the Contractors attention is called to the need to maintain areas free of accumulations of waste materials and earth, rubbish and other debris resulting from the work.

Generally, the transportation of materials to and from the site shall be over regular streets. When the Contractor's operations or that of its shippers, haulers, or subcontractors are such that dirt, mud, or debris is spilled or otherwise deposited on streets, driveways, sidewalks, or other thoroughfares near the project site, the Contractor shall immediately clean up large chunks after each truck of deposits of any debris on the road and shall before the close of every day's operations scrape any mud, dirt or debris from the surface and as directed by the Engineer to maintain safe conditions for the traveling public. Streets, driveways, sidewalks, or other thoroughfares shall be washed if directed by the Engineer. In case of dispute or Contractor's failure to perform this cleanup work, the City may elect to clean the streets and walks, remove the rubbish, etc., and will charge the cost to the Contractor, by withholding monies due to cover all charged work.

Opening burning of debris will not be permitted unless specifically authorized in writing by the Town, and then only following state, municipal or other local codes, ordinances, rules or regulations.

The Contractor shall control cleaning operations so that dust and other particles will not adhere to wet or newly-coated surfaces.

Work necessary to comply with these cleaning and debris control requirements shall not be paid for separately but shall be considered included in the various pay items of the contract.

COOPERATION BETWEEN CONTRACTORS

Several construction contracts may be in place adjacent to this work site while this contract is in effect. The Contractor will cooperate with other contractors in performing the work as specified in Article 105.08.

Other construction projects may require the closure of streets in the Uptown Normal area. Contractors involved with the other construction projects will be made aware of the Uptown Normal Gateway Plaza project and will allow necessary access across their project site for the construction of the project. Activities associated with these projects are available from the Engineer upon request.

Access to and from the adjacent construction sites will be required at all times. Cooperation and

coordination between contractors will be required.

X7010216 TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

Description

This work shall consist of providing the necessary traffic control personnel and devices and the installation, maintenance, relocation and removal of these devices during construction of the improvement.

The Town of Normal will be responsible for notifying the public, the United States Postal Service, Bloomington-Normal Public Transit System and the emergency service agencies for road closures and changes in the Traffic Control Plans.

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

Special attention is called to Articles 105.03(b), 107.09, 107.14, 107.15, and 107.25 of the Standard Specifications, Sections 701 of the Standard Specifications, and the following Highway Standards, Local Roads Special Provisions and Recurring Special Provisions, and Plan Details.

Highway Standards:
701301, 701501, 701701, 701801, 701901

Special Provisions:
LRS 3 Work Zone Traffic Control
LRS 4 Flaggers in Work Zones

Plan Notes:
Maintenance of Traffic General Notes

Construction Staging Requirements - Lane closures and the conveyance of local traffic within and around the construction zone shall be provided for in accordance with the above referenced Highway Standards, and as directed by the Engineer. All traffic control devices and barricades required for construction of the project shall remain in place until the construction is substantially complete, or as otherwise directed by the Engineer.

Maintenance of Traffic - It is the Town's intention to keep all streets open to all traffic at all times during construction of the project. The Contractor will be allowed to close one traffic lane adjacent to the work zone during working hours with two-way traffic being maintained by flaggers.

The following Highway Standards shall be utilized by the Contractor during construction of the improvement:

Standard 701301:	Short term lane closures.
Standard 701501:	Single lane closures.
Standard 701701:	Intersection closures.
Standard 701801:	Sidewalk closures.
Standard 701901:	Traffic control devices.

The traffic control and protection required by the Traffic Control Plans and the Highway Standards and as directed by the Engineer will not be paid for separately, but shall be included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed.

The Contractor shall provide and maintain access to public and private properties abutting the construction in accordance with Article 107.09 of the Standard Specifications.

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

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

Only signs, barricades, vertical panels, drums, and cones that meet the requirements of IDOT's "Quality Standard for Work Zone Traffic Control Devices 2004" shall be used on this project. Copies of this publication are available from the Town Engineer for the Contractor's use prior to the initial setup. At the time of the initial setup or at the time of major stage changes, 100% of each type of device (cones, drums, barricades, vertical panels or signs) shall be acceptable as defined by the referenced publication. Throughout the duration of the project, the percentage of acceptable devices may decrease to 75% only as a result of damage and/or deterioration during the course of the work. Work shall not begin until a determination has been made that the traffic control devices meet the quality required in this standard. The Contractor is required to conduct routine inspections of the work site at a frequency that will allow for the prompt replacement of any traffic control device that has become displaced or damaged to the extent that it no longer conforms to the shape, dimensions, color, and operational requirements of the MUTCD and the Traffic Control Standards, or that it no longer presents a neat appearance to motorists. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.

Placement of Traffic Control Signs and Devices - The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic advanced warning signs during

construction operations in order to keep lane assignment consistent with barricade placement at all times. The Contractor shall immediately remove, cover, or turn from the view of the motorists all traffic control devices which are inconsistent with detour or lane alignment patterns and conflicting conditions during the transition from one construction stage to another. When the Contractor elects to cover conflicting or inappropriate signing materials used, he/she shall totally block out reflectivity of the sign and shall cover the entire sign. The method used for covering the signing shall meet the approval of the Engineer.

The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. When directed by the Engineer, the Contractor shall remove all traffic control devices which were furnished and installed and maintained by him/her under this contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Engineer.

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

Solar Powered Arrow Boards - Arrow boards shall be used as required by the Standards and as directed by the Engineer. All arrow boards to be used on this project shall be solar powered. Any additional cost in meeting this requirement shall be included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed.

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

Flashing lights shall be used on each approach in advance of the work area, and in accordance with the details shown in the plans and the Highway Standards.

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

Hazard Lights - The Contractor will install flashing amber lights visible from all directions on all equipment operating on active traffic lanes unless otherwise directed by the Engineer. This work shall be considered included in the cost of the various traffic control pay items and no additional compensation will allowed.

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

Channelizer Cones – The use of channelizer cones will be permitted as directed by the Engineer. Flashing lights shall be mounted to the top of the cones. The channelizer cones shall be part number C-42 as supplied by Work Area Protection Corp., P. O. Box 4087, St. Charles, Illinois, 60174 or approved equal. The cost to furnish, install, maintain and remove the channelizer cones shall be included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed.

Pedestrian Sidewalk and Trail Control - It is the Town of Normal's intention to provide pedestrian access at all times to businesses throughout the project limits during construction of the improvement. Constitution Trail shall also remain open for pedestrian use unless directed otherwise by the Engineer. The Contractor may restrict pedestrian access through the work zones by utilizing Highway Standard 701801 and as directed by the Engineer. Where construction activities involve work on both sides of the street, the work shall be staged so that both sidewalks are not out of service at the same time unless otherwise noted.

The Contractor shall install, maintain, and remove necessary signs, barricades and fences needed to direct pedestrians to usable sidewalks, walkways and the Trail during the construction, and as directed by the Engineer. At each point of sidewalk closures, a sufficient number of barricades or fences shall be used to completely close the sidewalk to pedestrian movement. Pathways shall be marked by the erection of plastic industrial safety fencing 4 feet tall or other methods approved by the Engineer for pedestrian safety and for the isolation of construction equipment and supplies.

The cost to provide pedestrian access as specified shall be included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed. The cost for the safety fencing shall be paid separately as specified herein.

Temporary Sidewalks or Trail - This shall work consists of furnishing and constructing temporary surfaces for sidewalks or Constitution Trail as directed by the Engineer. The temporary surfaces shall be aggregate for temporary access, 4 inches thick or incidental hot-mix asphalt surfacing, 2 inches thick.

The cost for constructing the temporary surfaces will be paid for at the contract unit price per ton for AGGREGATE FOR TEMPORARY ACCESS or INCIDENTAL HOT-MIX ASPHALT SURFACING.

Temporary Fencing - This shall work consists of furnishing and erecting temporary fencing in accordance with Section 201.05 of the Standard Specifications and as directed by the Engineer. Temporary fencing shall be repaired as necessary and shall be removed as directed by the Engineer or the conclusion of the contract.

Materials: Orange safety fence a minimum of 4 foot high shall be used and secured to metal fence posts placed at a maximum of 10 foot spacings. Fencing shall be secured to posts using plastic "zip-ties" or other methods to minimize tearing of the fence in high winds. The use of "tie-wire" to secure

the fence is prohibited. In hard surfaced areas, alternate methods of temporary fencing will be allowed with the permission of the Engineer.

Limited Access - Due to the amount of pedestrian activity and retail nature of the Uptown area, Contractor equipment and vehicles not essential for performing construction activities shall be restricted as directed by the Engineer. The Contractor shall provide for off-site parking of his/her equipment and vehicles as directed by the Engineer.

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

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

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

The Contractor shall maintain entrances and side roads along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences caused to the Contractor by complying with these requirements shall be included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed.

Special Events - Certain events and activities will take place in or near the project area which may affect construction activities. A complete list of these events will be provided to the Contractor by the Engineer prior to construction. Scheduled events at this time include but not limited to:

Sugar Creek Arts Festival, July 9th and 10th

- The Contractor will be required to have project limits cleaned-up and vacated by 3:00 p.m. on Friday, July 8th.

Trailside Farmers Market, Tuesday afternoons throughout the summer

- Farmers Market will impact activities on East Beaufort Street only.
- The Contractor will be required to have the project limits on East Beaufort Street cleaned-up and vacated by 2:00 p.m. every Tuesday or as directed by the Engineer.

Sweet Corn Blues Festival, August 27th

- The Contractor will be required to have project limits cleaned-up and vacated by 3:00 p.m. on Friday, August 26th.

Treat Feast, October 30th

- The Contractor will be required to have project limits cleaned-up and vacated by 3:00 p.m. on Saturday, October 29th.

Holiday Open House, November (dates to be confirmed)

- The Contractor will be required to have project limits cleaned-up and vacated by 3:00 p.m. on the day preceding the event.

Other events may be planned to take place concurrently with the construction activities. The Contractor will be informed of these events so planning and coordination can take place prior to the event as necessary. Special effort may be required by the Contractor prior to these events to assure roadways and pedestrian areas are clean, well maintained and areas around the construction zones are safe for the public. Any additional work required to prepare and coordinate construction activities around these events shall not be paid separately but shall be included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed.

Brooming Roadway - All traffic lanes which are closed to through traffic during construction shall be broomed or swept free of all loose gravel or construction debris before the traffic lane is reopened to traffic. All roadway surface conditions shall be approved by the Engineer before they are opened to traffic. This work will not be paid for separately, but shall be included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed.

Measurement and Payment

All work described and referenced herein shall be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL) and no additional compensation will be allowed. The price for Traffic Control and Protection, (Special) shall be considered payment in full for all labor, materials, transportation, handling and incidental work necessary to furnish, install, relocate, maintain and remove all traffic control devices as required by the Traffic Control Plan and Highway Standards and as approved by the Engineer, for the duration of the contract. No separate payment will be made for complying with the provisions of individual Highway Standards.

The temporary pedestrian fences will be paid for at the contract unit price per foot for TEMPORARY FENCE, which price shall be payment in full for all labor, materials, transportation, handling and incidentals necessary to furnish, install, maintain, replace, relocate and remove all pedestrian traffic controls indicated in the Plans and Specifications. Delays to the Contractor caused by complying with these requirements will be considered included in the cost of this pay item and no additional compensation will be allowed.

CONSTRUCTION ON PRIVATE PROPERTY

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

The cost of compliance with this Special Provision shall be included in the cost of the various pay items and no additional compensation will be allowed.

EXISTING TREES AND SHRUBS

The Contractor shall be liable for damages to existing trees and shrubs, unless such damages are determined by the Engineer to have been unavoidable. Such trees or shrubs shall be repaired or replaced immediately as directed in Article 201.07 of the Standard Specifications.

The cost of compliance with this Special Provision shall be included in the cost of the various pay items and no additional compensation will be allowed.

CHANGED TOPOGRAPHIC CONDITIONS

Due to ongoing utility construction and other building projects in the vicinity of this project, the existing topographic features may be different from the features shown on the plans. The removal and relocation quantities will be measured in place to reflect the exact field conditions. The contractor shall notify the engineer of any changed field conditions that are discovered prior to performing the removal or relocation work. The contractor will be paid for actual quantities measured in place and no additional compensation will be allowed due to changed field conditions.

REMOVAL OF UNCLASSIFIED MATERIAL

Debris or unclassified materials shall be removed as directed by the Engineer. The material removed as required in this Special Provision shall be disposed of outside the limits of the right-of-way in accordance with Article 202.03 of the Standard Specifications and as directed by the Engineer.

This work will not be paid for separately and shall be included in the cost of the various pay items and no additional compensation will be allowed.

SALVABLE MATERIALS

All materials deemed salvable by the Engineer shall remain the property of the Town of Normal and shall be stored on the job site as directed by the Engineer. The Contractor shall dispose of any materials off site that the Engineer determines should not be salvaged.

This work will not be paid for separately and shall be included in the cost of the various pay items and no additional compensation will be allowed.

STOCKPILE AREAS

Short-term stockpile of topsoil, backfill, aggregate, landscaping and other materials will be allowed only in areas designated by the Engineer. Temporary stockpiles of materials shall not interfere with local and through traffic or pedestrian access. Stockpiles of materials shall not be allowed outside the street right-of-way on private property unless permission is granted by the owner in writing and shall not be allowed to block driveways or sidewalks. Any grass area beyond the right-of-way, permanent easements, or construction easements that is damaged by stockpiled material shall be repaired with sod as directed by the Engineer.

Care should be taken by the Contractor when placing soil and other materials on pavement surfaces. The Contractor shall be responsible for cleaning surfaces after construction activities including removal of any foreign material from adjacent drainage structures. Final clean-up shall be done to the satisfaction of the Engineer.

This work will not be paid for separately and shall be included in the cost of the various pay items and no additional compensation will be allowed. Any costs associated with restoring areas to pre-construction conditions as determined by the Engineer shall be at the Contractors own expense.

HAND GRADING

Grading shall be done by hand around light poles, utility poles, sign posts, shrubs, trees or other natural or man-made objects where shallow fills or cuts are adjacent to the items. It is the intent that the limits of construction be such as to preserve the original state as much as possible. The decision as to items to remain in place shall be as directed by the Engineer.

This work will not be paid for separately and shall be included in the cost of the various pay items and no additional compensation will be allowed.

EXISTING IRRIGATION SYSTEM IDENTIFICATION AND USE

The Contractor shall be aware of existing irrigation systems within the project limits. Information concerning the location and operation of these systems will be provided by the Town of Normal.

The Contractor shall locate existing irrigation systems within the project limits prior to any construction activities. Existing irrigation systems shall be protected from damage as directed by the Engineer. The Contractor shall be liable for unnecessary damages to the existing irrigation systems, unless such damages are determined by the Engineer to have been unavoidable. Such irrigation systems shall be repaired or replaced immediately as directed by the Engineer.

The Contractor will be permitted to use the existing irrigation systems for watering purposes during construction. The use of any existing irrigation system shall be coordinated with the Engineer.

This work will not be paid for separately and shall be included in the cost of the various pay items and no additional compensation will be allowed.

CONNECTING INTO EXISTING MANHOLES AND STORM SEWERS

At locations indicated in the plans, proposed storm sewers or underdrains are to be connected into existing manholes, cisterns or storm sewers. These connections shall be made in a workmanlike manner and masonry constructed around them so as to prevent leakage.

This work will not be paid for separately and shall be included in the cost of the various storm sewer or underdrain pay items and no additional compensation will be allowed.

20100110 TREE REMOVAL

Description

This work shall consist of the cutting, grubbing, removal, and disposal of trees and stumps in accordance with Section 201 of the Standard Specifications and the following additions or exceptions.

Trees shall be removed at the locations shown in the plans and as directed by the Engineer. For tree removal, all trees, stumps, and roots shall be completely removed and disposed of unless otherwise directed by the Engineer.

Measurement and Payment

This work will be measured for payment in accordance with Article 201.10(b)(1) of the Standard Specifications and will be paid for at the contract unit price per unit diameter for TREE REMOVAL (6 TO 15 UNITS DIAMETER), which price shall include all labor, equipment, and material necessary to complete the work as specified. The removal of bushes, brush, and trees less than six inches in diameter will not be measured for payment. Protection and care of existing plant material as directed by the Engineer will not be measured for payment.

20201200 REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

Description

This work shall consist of undercutting, removing, and disposing of unsuitable material below the proposed subgrade limits in accordance with Section 202 of the Standard Specifications, the details

shown on the plans and the following additions or exceptions.

The unsuitable material shall be removed at the locations determined by the Engineer. All unsuitable materials shall be disposed of off the site unless otherwise directed by the Engineer. The excavations below the subgrade limits shall be backfilled with Granular Embankment, Special material as directed by the Engineer. A quantity for Removal and Disposal of Unsuitable Material has been included in the plans for the purpose of establishing a unit bid price in case unsuitable materials are discovered. It is hereby understood that the Town of Normal reserves the right to delete any or this entire pay item from the contract. Should the Town delete any or all of this pay item from the contract, the Contractor will not receive payment for the deleted item.

Measurement and Payment

This work will be measured for payment in accordance with Article 202.07(b) of the Standard Specifications and will be paid for at the contract unit price per cubic yard for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL, which price shall include all labor, equipment, and material necessary to complete the work as specified. Backfilling the excavated areas with Granular Embankment, Special material will be measured and paid for separately as specified herein.

21000300 GRANULAR EMBANKMENT, SPECIAL

Description

This work shall consist of placing granular embankment in excavations created by the removal of unsuitable material, structures, or foundations. The locations for the placement of the granular embankment will be as directed by the Engineer. A quantity has been included in the plans for the purpose of establishing a unit bid price for the granular embankment, special. It is hereby understood that the Town of Normal reserves the right to delete any or this entire pay item from the contract. Should the Town delete any or all of this pay item from the contract, the Contractor will receive no remuneration for the deleted item.

The granular embankment material shall be placed in uniform layers not exceeding 8 inches loose measure and compacted by a vibratory roller meeting the requirements of Article 1101.01 of the Standard Specifications or by ramming or tamping as directed by the Engineer. The granular embankment material shall be crushed gravel, crushed stone or crushed concrete having a gradation of CA 1 or a gradation approved by the Engineer. The material shall meet the requirements of Article 1004.01 of the IDOT Standard Specifications.

Measurement and Payment

This work will be measured and paid for at the contract unit price per ton for GRANULAR EMBANKMENT, SPECIAL, which price shall include furnishing, placing and compacting the material.

40201000 AGGREGATE FOR TEMPORARY ACCESS

Description

This work shall consist of furnishing and placing Type B aggregate surface course in accordance with Section 402 of the Standard Specifications and the following additions or exceptions.

The aggregate material shall be used to fill voids between the existing and proposed pavements and sidewalks to allow for access for vehicles or pedestrians. The aggregate material shall be used to fill voids at other locations as directed by the Engineer. The aggregate material shall be placed to the thickness and compacted as directed by the Engineer.

The aggregate material shall be salvaged and reused where possible as directed by the Engineer. The Contractor shall be responsible for maintaining the aggregate material until such time that the material is no longer required as directed by the Engineer. The aggregate material that is no longer required shall be disposed of by the Contractor off the site in accordance with Article 202.03 of the Standard Specifications.

Measurement and Payment

This work will be measured for payment in accordance with Article 402.12 of the Standard Specifications and will be paid for at the contract unit price per ton for AGGREGATE FOR TEMPORARY ACCESS, which price shall include all labor, equipment, and material necessary to complete the work as specified.

44000100 PAVEMENT REMOVAL

Description

This work shall consist of the complete removal of existing pavement in accordance with Section 440 of the Standard Specifications and the following additions or exceptions.

Pavement removal shall be defined as portland cement concrete or asphalt pavement and shall include portland cement concrete or asphalt bases, overlays, and stabilized subbase. Materials resulting from the removal of existing pavement and appurtenances shall be disposed of in accordance with Article 202.03 of the Standard Specifications.

Measurement and Payment

This work will be measured for payment in accordance with Article 440.07 of the Standard Specifications and will be paid for at the contract unit price per square yard for PAVEMENT

REMOVAL, which price shall include all labor, equipment, and material necessary to complete the work as specified.

No additional compensation will be allowed for pavement removal due to variations in the existing pavement type, thickness, or amount of reinforcement. The adjustment of quantities as specified in Article 440.07(c) of the Standard Specifications shall not apply.

60100915 PIPE DRAINS 6"

Description

This work shall consist of the construction of pipe drains as shown on the plans and in accordance with Section 601 of the Standard Specifications except that only polyvinyl chloride (PVC) pipe or corrugated polyethylene (PE) pipe with a smooth interior will be allowed. The pipe material shall be in accordance with Articles 1040.03 or 1040.04 of the Standard Specifications. The trenches shall be backfilled with fine aggregate Trench Backfill material.

Measurement and Payment

This work will be measured for payment at the contract unit price per foot for PIPE DRAINS 6", which price shall include excavation and fine aggregate backfilling. Measurement will be in accordance with Articles 601.07 of the Standard Specifications.

60107700 PIPE UNDERDRAINS 6"

Description

This work shall consist of the construction of pipe underdrains as shown on the plans and in accordance with Section 601 of the Standard Specifications except that only perforated corrugated polyethylene (PE) pipe with a smooth interior and fabric envelope around the pipe will be allowed. A fabric envelope around the trench walls will not be required. The underdrains shall also be provided with cleanouts as shown on the detail in the plans. The pipe material shall be in accordance with Article 1040.04 of the Standard Specifications. The trenches shall be backfilled with coarse aggregate material CA 16.

Measurement and Payment

This work will be measured for payment at the contract unit price per foot for PIPE UNDERDRAINS 6", which price shall include excavation, aggregate (CA 16) backfilling, cleanouts and fittings. Measurement will be in accordance with Articles 601.07 of the Standard Specifications.

X6023508 INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE

Description

This work shall consist of constructing Type A inlets with special frames and grates at the locations shown on the plans and as directed by the Engineer. The work shall be done in accordance with the detail shown on the plans and the applicable articles of Section 602 of the Standard Specifications and the details of Highway Standard Drawing 602301.

Materials

The frame and grate shall be as shown on the detail in the plans and be manufactured by Neenah Foundry Company, 2121 Brooks Ave, Neenah, Wisconsin, telephone number 920-725-7000 or approved equal. The frame and grate shall be model number R-1879-A1G with Type "Q" pattern with 3/8 inch openings.

Measurement and Payment

This work will be paid for at the contract unit price each for INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE, which price shall include all work including the inlet and special frame and grate.

X6024503 INLETS TO BE ADJUSTED WITH FRAME AND GRATE (SPECIAL)

Description

This work shall consist of adjusting to grade existing inlets with special frames and grates at the location shown on the plans and as directed by the Engineer. The work shall be done in accordance with the detail shown on the plans and the applicable articles of Section 602 of the Standard Specifications. The inlets shall be adjusted by removing the existing frame and lid and installing a new special frame and grate and any concrete adjusting rings that may be necessary to bring the frame and grate to the finished grade elevations shown on the plans.

Materials

The frame and grate shall be as shown on the detail in the plans and be manufactured by Neenah Foundry Company, 2121 Brooks Ave, Neenah, Wisconsin, telephone number 920-725-7000 or approved equal. The frame and grate shall be model number R-1879-A1G with Type "Q" pattern with 3/8 inch openings.

Measurement and Payment

This work will be paid for at the contract unit price each for INLETS TO BE ADJUSTED WITH FRAME AND GRATE (SPECIAL), which price shall include removing the frame and lid and furnishing and installing concrete adjusting rings and the new frame and grate.

RAILROAD COORDINATION

Description

This work shall consist of all necessary coordination with the Union Pacific Railroad Company for working within the Railroad's right of way including acquiring the services of a railroad flagger when the Contractor's operations encroach on the railroad right of way as described in Article 107.12 of the Standard Specifications.

The Contractor shall comply with and complete the following "Contractor's Right of Entry Agreement" and all exhibits and attachments thereto. The Contractor shall comply with any additional insurance requirements required by the Railroad beyond the requirements of the "Special Provision for Railroad Protective Liability Insurance (5 and 10)" (BDE 80157).

The Contractor shall notify the Engineer in advance of any work on the railroad right of way and receive approval from the Engineer prior to requesting the railroad flagger's services. The Contractor will be responsible for contacting the Railroad for the services of the flagger and for determining the minimum notification time that is required. The railroad representative's name is Paul Gegg and the telephone number is 402-501-3734.

Measurement and Payment - This work of coordinating with the Railroad including completing and securing the "Contractor's Right of Entry Agreement" including any additional insurance requirements will not be paid for separately and shall be included in the contract unit prices for the various items of work involved.

RAILROAD FLAGGERS

Description - The Contractor shall pay the costs of providing flaggers as specified in Article 107.12 of the Standard Specifications with the exception of flaggers required for transporting material or equipment across the track. The Contractor will be reimbursed for eligible flagging cost in accordance with Article 109.05 of the Standard Specifications.

Contractor's Right of Entry - 07/30/01
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CONTRACTOR'S
RIGHT OF ENTRY AGREEMENT

THIS AGREEMENT is made and entered into as of the _____ day of_____ 20___, by and between **UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation (the "Railroad"); and:

_____
(Name of Contractor)

to be addressed at _____

_____

(hereinafter the "Contractor")

RECITALS: Contractor has been hired by the Town of Normal, Illinois to perform work relating to the construction of sidewalks and plaza removal and replacement (the "Work"), with all or a portion of such .work to be performed on property of the Town of Normal and adjacent to Railroad property in the vicinity of Milepost 124.00 in Normal, Illinois ..

Contractor has requested Railroad to permit it to perform the work on Railroad's property, and Railroad is agreeable thereto, subject to the following terms and conditions.

AGREEMENT:

NOW, THEREFORE, it is mutually agreed by and between the Railroad and Contractor, as follows:

ARTICLE 1 - DEFINITION OF CONTRACTOR.

For purposes of this agreement, all references in this agreement to the Contractor shall include the Contractor's contractors, subcontractors, officers, agents and employees, and others acting under its or their authority.

ARTICLE 2 - RIGHT GRANTED; PURPOSE.

The Railroad hereby grants to the Contractor the right, during the term hereinafter stated and upon and subject to each and all of the terms, provisions and conditions herein contained, to enter upon and have ingress to and egress from the property described in the Recitals for the purpose of performing any work described in the Recitals above. The right herein granted to Contractor is limited to those portions of Railroad's property specifically described herein, or as designated by the Railroad Representative named in Article 4.

ARTICLE 3 - TERMS AND CONDITIONS CONTAINED IN EXHIBITS A. B•AND C.

The terms and conditions contained in Exhibit A, Exhibit B and Exhibit C, attached hereto, are hereby made a part of this agreement.

Contractor's Right of Entry - 07/30/01
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ARTICLE 4• ALL EXPENSES TO BE BORNE BY CONTRACTOR; RAILROAD REPRESENTATIVE.

A. The Contractor shall bear any and all costs and expenses associated with any work performed by the Contractor, or any costs or expenses incurred by the Railroad relating to this agreement.

B. The Contractor shall coordinate all of its work with the following Railroad representative or his or her duly authorized representative (the "Railroad Representative"):

Paul Gegg (Phone: 402-501-3734

C. The Contractor, at its own expense, shall adequately police and supervise all work to be performed by the Contractor and shall ensure that such work is performed in a safe manner as set forth in Section 7 of **Exhibit A.** The responsibility of the Contractor for safe conduct and adequate policing and supervision of the Contractor's work shall not be lessened or otherwise affected by the Railroad's approval of plans and specifications involving the work, or by the Railroad's collaboration in performance of any work, or by the presence at the work site of the Railroad Representative, or by compliance by the Contractor with any requests or recommendations made by the Railroad Representative.

ARTICLE 5 • TERM; TERMINATION.

A. The grant of right herein made to Contractor shall commence on the date of this agreement, and continue until _____, unless sooner terminated as herein provided, or at such time as Contractor has completed its work on Railroad's property, whichever is earlier. Contractor agrees to notify the Railroad Representative in writing when it has completed its work on Railroad property.

B. This agreement may be terminated by either party on ten (10) days written notice to the other party.

ARTICLE 6 • CERTIFICATE OF INSURANCE.

A. Before commencing any work, Contractor will provide Railroad with the insurance binders, policies, certificates and/or endorsements set forth in **Exhibit B** of this agreement.

B. All insurance correspondence, binders, policies, certificates and/or endorsements shall be directed to:

Union Pacific Railroad Company
Industrial Development Department
1400 Douglas Street- Stop 1370
Omaha, NE 68179-1370

ARTICLE 7 • DISMISSAL OF CONTRACTOR/SUBCONTRACTOR EMPLOYEE.

At the request of Railroad, Contractor shall remove from Railroad property any employee of Contractor or any subcontractor who fails to conform to the instructions of the Railroad Representative in connection with the work on Railroad's property, and any right of Contractor shall be suspended until such removal has occurred. Contractor shall indemnify Railroad •against any claims arising from the removal of any such employee from Railroad property.

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ARTICLE 8 - CROSSINGS.

No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

ARTICLE 9 - EXPLOSIVES.

Explosives or other highly flammable substances shall not be stored on Railroad property without the prior written approval of the Railroad.

IN WITNESS WHEREOF, the parties hereto have duly executed this agreement in duplicate as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY

By_____
General Director-Industrial Development

_____
(Contractor's Name)

By_____

Title_____

Contractor's Right of Entry - 07/30/01
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EXHIBIT A
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

Section 1. **NOTICE OF COMMENCEMENT OF WORK ~ FLAGGING.**

A. The Contractor agrees to notify the Railroad Representative- at least ten (10) working days in advance of Contractor commencing its work and at least ten (10) working days in advance of proposed performance of any work by the Contractor in which any person or equipment will be within twenty":five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Railroad's track(s) at any time, for any reason, unless and until a Railroad flagman is provided to watch for trains. Upon receipt of such ten (10)-day notice, the Railroad Representative will determine and inform the Contractor whether a flagman need be present and whether the Contractor need implement any special protective or safety measures. If flagging or other special protective or safety measures are performed by the Railroad, such services will be provided at Contractor's expense with the understanding that if the Railroad provides any flagging or other services, the Contractor shall not be relieved of any of its responsibilities or liabilities set forth herein. Contractor shall promptly pay to Railroad all charges connected with such services within thirty (30) days after presentation of a bill.

B. The rate of pay per hour for each man will be the prevailing hourly rate in effect for an eight hour day for the class of men used during regularly assigned hours and overtime in accordance with Labor Agreements and Schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect on the day of execution of this agreement. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays; two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between the Railroad and its employees, and may be retroactive as a •result of negotiations or a ruling of an authorized Governmental Agency. .Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, the Contractor shall pay on the basis of the new rates and charges.

C. Reimbursement to the Railroad will be required covering the full eight hour day during which any flagman is furnished, unless he can be assigned to other Railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other Railr.oad work. Reimbursement will also be required for any day not actually worked by said flagman following his assignment to work on the project for which the Railroad is required to pay the flagman and which could not reasonably be avoided by the Railroad by assignment of such flagman to other work, even though the Contractor may not be working during such time. When it becomes necessary for the Railroad to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, the Contractor must provide the Railroad a minimum of five (5) days notice prior to the cessation of the need for a flagman. If five (5)-days notice of cessation is not given, the Contractor will still be required to pay flagging charges for the five (5)-day notice period required by union agreement to be given to the employee, even though flagging is not required for that period. An additional ten (10) days notice must then be given to the Railroad if flagging service are needed again after such five day cessation notice has been given Railroad.

Section 2. **LIMITATION AND SUBORDINATION OF RIGHTS GRANTED**

A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Railroad to use and maintain its entire property including the right and power of the Railroad to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, roadways, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by the Railroad without liability to the Contractor or to any other party for compensation or damages.

B. The foregoing grant is also subject to all outstanding superior rights (including those in favor of licensees and lessees of the Railroad's property, and others) and the right of the Railroad to renew and extend the same, and is 'made without covenant of title or for quiet enjoyment.

Section 3. **NO INTERFERENCE WITH OPERATIONS OF RAILROAD AND ITS TENANTS.**

A. The Contractor shall conduct its operations so as not to interfere with the continuous and uninterrupted use and operation of the railroad tracks and property of the Railroad, including without limitation, the operations of the Railroad's lessees, licensees or others, unless specifically authorized in advance by the Railroad Representative. Nothing shall be done or permitted to be done by the Contractor at any time that would in any manner impair the safety of such operations. When not in use, Contractor's machinery and materials shall be kept at least fifty (50) feet from the centerline of the Railroad's nearest track, and there shall be no vehicular crossings of Railroads tracks except at existing open public crossings.

B. Operations of the Railroad and work performed by the Railroad personnel and delays in the work to be performed by the Contractor caused by such railroad operations and work are expected by the Contractor, and Contractor agrees that the Railroad shall have no liability to Contractor, its subcontractors or any other person or entity for any such delays. The Contractor shall coordinate its activities with those of the Railroad and third parties so as to avoid interference with railroad operations. The safe operation of the Railroad takes precedence over any work to be performed by the Contractor.

Section 4. LIENS.

The Contractor shall pay in full all persons who perform labor or provide materials for the work to be performed by Contractor. The Contractor shall not create, permit or suffer any mechanic's or materialmen's liens of any kind or nature to be created or enforced against any property of the Railroad for any such work performed. The Contractor shall indemnify and hold harmless the Railroad from and against any and all liens, claims, demands, costs or expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished. If the Contractor fails to promptly cause any lien to be released of record, the Railroad may, at its election, discharge the lien or claim of lien at Contractor's expense.

Section 5. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

A. Fiber optic cable systems may be buried on the Railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Contractor shall telephone the Railroad during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on the Railroad's premises to be used by the Contractor. If it is, Contractor will telephone the telecommunications company(ies) involved, make arrangements for a cable locator and, if applicable, for relocation or other protection of the fiber optic cable. The Contractor shall not commence any work until all such protection or relocation (if applicable) has been accomplished.

B. In addition to other indemnity provisions in this Agreement, the Contractor shall indemnify, defend and hold the Railroad harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys' fees, court costs and expenses) arising out of any act or omission of the Contractor, its contractor, agents and/or employees, that causes or contributes to (1) any damage to or destruction of any telecommunications system on Railroad's property, and/or (2) any injury to or death of any person employed by or on behalf of any telecommunications company, and/or its contractor, agents and/or employees, on Railroad's property. Contractor shall not have or seek recourse against Railroad for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Railroad's property or a customer or user of services of the fiber optic cable on Railroad's property.

Section 6. PERMITS - COMPLIANCE WITH LAWS.

In the prosecution of the work covered by this agreement, the Contractor shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 7. SAFETY.

A. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by the Contractor. The Contractor shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work. The Contractor shall at a minimum comply with the Railroad's safety standards listed in Exhibit C, hereto attached, to ensure uniformity with the safety standards followed by the Railroad's own forces. As a part of the Contractor's safety responsibilities, the Contractor shall notify the Railroad if the Contractor determines that any of the Railroad's safety standards are contrary to good safety practices. The Contractor shall furnish copies of Exhibit C to each of its employees before they enter on the job site.

B. Without limitation of the provisions of paragraph A above, the Contractor shall keep the job site free from safety and health hazards and ensure that its employees are competent and adequately trained in all safety and health aspects of the job .

C. The Contractor shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. The Contractor shall promptly notify the Railroad of any U.S. Occupational Safety and Health Administration reportable injuries. The Contractor shall have a nondelegable duty to control its employees while they are on the job site or any other property of the Railroad, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.

D. If and when requested by the Railroad, the Contractor shall deliver to the Railroad a copy of the Contractor's safety plan for conducting the work (the "Safety Plan"). Railroad shall have the right, but not the obligation, to require the Contractor to correct any deficiencies in the Safety Plan. The terms of this agreement shall control if there are any inconsistencies between this agreement and the Safety Plan.

Contractor's Right of Entry - 07/30/01
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Section 8. INDEMNITY.

A. To the extent• not prohibited by applicable statute, the Contractor shall indemnify, defend and hold harmless the Railroad, its affiliates, and its and their officers, agents and employees ("Indemnified Parties") from and against any and all loss, damage, injury, liability, claim, demand, cost or expense (including, without limitation, attorney's, consultant's and expert's fees, and court costs), fine or penalty (collectively, "Loss") incurred by any person (including, without limitation, any Indemnified Party, the Contractor, or any employee of the Contractor or of any Indemnified Party) arising out of or in any manner connected with (i) any work performed by the. Contractor, or (ii) any act or omission of the Contractor, its officers, agents or employees, or (iii) any breach of this agreement by the Contractor.

B. The right to indemnity under this Section 8 shall accrue upon occurrence of the event giving rise to the Loss, and shall apply regardless of any negligence or strict liability of any Indemnified Party, except where the Loss is caused by the sale active negligence of an Indemnified Party as established by the final judgment of a court of competent jurisdiction. The sole active negligence of any Indemnified Party shall not bar the recovery of any other Indemnified Party.

C. The Contractor expressly and specifically assumes potential liability under this Section 8 for claims or actions brought by the Contractor's own employees. The Contractor waives any immunity it may have under worker's compensation or industrial insurance acts to indemnify the Railroad under this Section 8. Contractor acknowledges that this waiver was mutually negotiated by the parties hereto.

D. No court or jury findings in any employee's suit pursuant to any worker's compensation act or the Federal Employers' Liability Act against a party to this agreement may be relied upon or used by the Contractor in any attempt to assert liability against the Railroad.

E. The provisions of this Section 8 shall survive the completion of any work performed by the Contractor or the termination or expiration of this agreement. In no event shall this Section 8 or any other provision of this agreement be deemed to limit any liability the Contractor may have to any Indemnified ,Party by statute or under common law.

Section 9. RESTORATION OF PROPERTY.

In the event the Railroad authorizes the Contractor to take down any fence of the Railroad or in any manner move or disturb any of the other property of the Railroad in connection with the work to be performed by Contractor, then in that event the Contractor shall, as soon as possible and at Contractor's sole expense, restore such fence and other property to the same condition as the same were in before such fence was taken down or such other property was moved or disturbed. The Contractor shall remove all of Contractor's tools, equipment, rubbish and other materials from Railroad's property promptly upon completion of the work, restoring Railroad's property to the same state and condition as when Contractor entered thereon.

Section 10. WAIVER OF DEFAULT.

Waiver by the Railroad of any breach or default of any condition, covenant or agreement herein contained to be kept, observed and performed by the Contractor shall in no way impair the right of the Railroad to avail itself of any remedy for any subsequent breach or default.

Section 11. MODIFICATION - ENTIRE AGREEMENT.

No modification of this agreement shall be effective unless made in writing and signed by the Contractor and the Railroad. This agreement and the exhibits attached hereto and made a part hereof constitute the entire understanding between the Contractor and the Railroad and cancel and supersede any prior negotiations, understandings or agreements, whether written or oral, ,with respect to the work to be performed by the Contractor.

Section 12. ASSIGNMENT - SUBCONTRACTING.

The Contractor shall not assign or subcontract this agreement, or any interest therein, without the written consent of the Railroad. The Contractor shall be responsible for the acts and omissions of all subcontractors, and shall require all subcontractors to maintain the insurance coverage required to be maintained• by the Contractor as provided in this agreement, and to indemnify the Contractor and the Railroad to the same extent as the Railroad is indemnified by the Contractor under this agreement.

Approved: Insurance Group
Created: 9/23/05
Last Modified: 9/23/05

EXHIBIT B
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

Union Pacific Railroad Company
Insurance Requirements

Contractor shall, at its sole cost and expense, procure and maintain during the life of this Agreement (except as otherwise provided in this Agreement) the following insurance coverage:

A. **Commercial General Liability** insurance. Commercial general liability (CGL) with a limit of not less than $1,000,000 each occurrence and an aggregate limit of not less than $2,000,000. CGL insurance must be written on ISO occurrence form CG 000112 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, which must be stated on the certificate of insurance:

• Contractual Liability Railroads ISO form CG 2417 1001 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Property" as the Designated Job Site.

B. **Business Automobile Coverage** insurance. Business auto coverage written on ISO Form CA 00 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less $1,000,000 for each accident.

The policy must contain the following endorsements, which must be stated on the certificate of insurance:

• Coverage for Certain Operations in Connection with Railroads ISO Form CA 20701001 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Property" as the Designated Job Site.
• Motor Carrier Act Endorsement - Hazardous Materials Cleanup (MCS-90) if required by law.

C. **Workers' Compensation and Employers Liability** insurance. Coverage must include but not be limited to:

• Contractor's statutory liability under the workers' compensation laws of the state(s) affected by this Agreement.
• Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 disease policy limit, $500,000 each employee.

If Contractor is self-insured, evidence of state approval and excess Workers' Compensation coverage must be provided. Coverage must include liability arising out of the U.S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

The policy must contain the following endorsement, which must be stated on the certificate of insurance:

• Alternate Employer Endorsement ISO Form WC 00 03 01 A (or a substitute form providing equivalent coverage) showing Railroad in the schedule as the alternate employer (or a substitute form providing equivalent coverage).

D. **Railroad Protective Liability** insurance. Contractor must maintain Railroad Protective Liability insurance written on ISO Occurrence Form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad as named insured, with a limit of not less than $2,000,000 per occurrence and an- aggregate of $6,000,000. A binder stating the policy is in place must be submitted to Railroad before the work may be commenced and until the original policy is forwarded to Railroad.

E. **Umbrella or Excess** insurance. If Contractor utilizes umbrella or excess policies, these policies must "follow form" and afford no less coverage than the primary policy.

Approved: Insurance Group
Created: 9/23/05
Last Modified: 9/23/05

F. **Pollution Liability** insurance. Pollution liability coverage must be written on ISO form Pollution Liability Coverage Form Designated Sites CG 00391204 (or a substitute form providing equivalent liability coverage), with limits of at least $5,000,000 per occurrence and an aggregate limit of $10,000,000.

If the scope of work as defined in this Agreement includes the disposal of any hazardous or non-hazardous materials from the job site, Contractor must furnish to Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of $1,000,000 per loss, and an annual aggregate of $2,000,000.

Other Requirements

G. All policy(ies) required above (except Worker's Compensation and Employers' Liability) must include Railroad as "Additional Insured" using ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26 and CA 20 48, provide coverage for Railroad's negligence whether sole or partial, active or passive, and shall not be limited by Contractor's liability under the indemnity provisions of this Agreement.

H. Punitive damages exclusion, if any, must be deleted (and the deletion indicated on the certificate of insurance), unless the law governing this Agreement prohibits all punitive damages that might arise under this Agreement.

I. Contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees. This waiver must be stated on the certificate of insurance.

J. Prior to commencing the work. Contractor shall furnish Railroad with a certificate(s} of insurance, executed by a duly authorized representative of each insurer. showing compliance with the insurance requirements in this Agreement.

K. All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the work is to be performed.

L. The fact that insurance is obtained by Contractor or by Railroad on behalf of Contractor will not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad from Contractor or any third party will not be limited by the amount of the required insurance coverage.

Contractor's Right of Entry - 07/30/01
Form Approved - AVP Law

EXHIBIT C
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

MINIMUM SAFETY REQUIREMENTS

The term "employees" as used herein refer to all employees of the Contractor as well as all employees of any subcontractor or agent of the Contractor.

1. **Clothing**

A. All employees of the Contractor will be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet. Specifically, the Contractor's employees must wear:

- Waist-length shirts with sleeves.
- Trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching.
- Footwear that covers their ankles and has a defined heel. Employees working on bridges are required to wear safety-toed footwear that conforms to the American National Standards Institute (ANSI) and FRA footwear requirements.

B. Employees shall not wear boots (other than work boots), sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal.

C. Employees must not wear loose or ragged clothing, neckties, finger rings, or other loose jewelry while operating or working on machinery.

2. **Personal Protective Equipment**

The Contractor shall require its employees to wear personal protective equipment as specified by-Railroad rules, regulations, or recommended or requested by the Railroad Representative.

- Hard hat that meets the American National Standard (ANSI) Z89.1 -latest revision. Hard hats should be affixed with the contractors or subcontractor's company logo or name.
- Eye protection that meets American National Standard (ANSI) for occupational and educational eye and face protection, ZB7.1 - latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, etc.
- Hearing protection, which affords enough attenuation to give protection from noise levels that will be occurring on the job site. Hearing protection, in the form of plugs or muffs, must be worn when employees are within:
- 100 feet of a locomotive or roadway/work equipment
- 15 feet of power operated tools
- 150 feet of jet blowers or pile drivers
- 150 feet of retarders in use (when within 10 feet, employees must wear dual ear protection - plugs and muffs)
- Other types of personal protective equipment, such as respirators, fall protection equipment, and face shields, must be worn as recommended or requested by the Railroad Representative.

3. **On Track Safety**

The Contractor is responsible for compliance with the Federal Railroad Administration's Roadway Worker Protection regulations-49CFR214, Subpart C and Railroad's On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training of their employees on such regulations. In addition to the instructions contained in Roadway Worker Protection regulations, all employees must:

- Maintain a distance of twenty-five (25) feet to any track unless the Railroad Representative is present to authorize movements.
- Wear an orange, reflectorized workwear approved by the Railroad Representative.
- Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Contractors must take special note of limits of track authority, which tracks mayor may not be fouled, and clearing the track. The Contractors will also receive special instructions relating to the work zone around machines and minimum distances between machines while working or traveling.

`Contractor's Right of Entry - 07/30/01
Form Approved - AVP Law

4. **Equipment**

A It is the responsibility of the Contractor to ensure that all equipment is in a safe condition to operate. If, in the opinion of the Railroad Representative, any of the Contractor's equipment is unsafe for use, the Contractor shall remove such equipment from the Railroad's property. In addition, the Contractor must ensure that the operators of all equipment are properly trained and competent in the safe operation of the equipment. In addition, operators must be:

- Familiar and comply with Railroad's rules on lockout/tagout of equipment.
- Trained in and comply with the applicable operating rules if operating any hy-rail equipment on-track.
- Trained in and comply with the applicable air brake rules if operating any equipment that moves rail cars or any other railbound equipment.

B. All self-propelled equipment must be equipped with a first-aid kit, fire extinguisher, and audible back-up warning device.

C. Unless otherwise authorized by the Railroad Representative, all equipment must be parked a minimum of twenty-five (25) feet from any track. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.

D. Cranes must be equipped with three orange cones that will be used to mark the working area of the crane and the minimum clearances to overhead powerlines.

5. **General Safety Requirements**

A. The Contractor shall ensure that all waste is properly disposed of in accordance with applicable federal and state regulations.

B. The Contractor shall ensure that all employees participate in and comply with a job briefing conducted by the Railroad Representative, if applicable. During this briefing, the Railroad Representative will specify safe work procedures, (including On-Track Safety) and the potential hazards of the job. If any employee has any questions or concerns about the work, the employee must voice them during the job briefing. Additional job briefings will be conducted during the work as conditions, work procedures, or personnel change.

C. All track work performed by the Contractor meets the minimum safety requirements established by the Federal Railroad Administration's Track Safety Standards 49CFR213.

D. All employees comply with the following safety procedures when working around any railroad track:

- Always be on the alert for moving equipment. Employees must always expect movement on any track, at any time, in either direction.
- Do not step or walk on the top of the rail, frog, switches, guard rails, or other track components.
- In passing around the ends of standing cars, engines, roadway machines or work equipment, leave at least 20 feet between yourself and the end of the equipment. Do not go between pieces of equipment if the opening is less than one car length (50 feet).
- Avoid walking or standing on a track unless so authorized by the employee in charge.
- Before stepping over or crossing tracks, look in both directions first. .
- Do not sit on, lie under, or cross between cars except as required in the performance of your duties and only when track and equipment have been protected against movement.

E. All employees must comply with all federal and state regulations concerning workplace safety.

ELECTRICAL AND LIGHTING SPECIFICATIONS

81900302 TRENCH AND BACKFILL WITH SCREENINGS OR SAND

Description

This work shall consist of constructing and backfilling a trench for conduit in accordance with Section 819 of the Standard Specifications and the following additions or exceptions.

Trenches for lighting conduit shall have a minimum depth of 24 inches or as otherwise indicated on the plans or directed by the Engineer.

Underground cable marking tape shall have a reinforced metallic detection strip.

Basis of Payment

This work will be paid for at the contract unit price per foot for TRENCH AND BACKFILL WITH SCREENINGS OR SAND, which prices shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

For conduit installed in trenches that are being excavated and backfilled for other items of proposed work, the trench and backfilling with screenings and sand will not be measured for payment under this pay item as determined by the Engineer.

X0321766 LIGHT POLE, SPECIAL (DECORATIVE ORNAMENTAL)

Description

This work shall consist of furnishing, transporting, and installing light pole with pendant arm, special, (decorative ornamental).

Materials.

Materials must be approved by the Town of Normal before ordering. Poles shall be assembled in the United States of America and provided with features as follows:

- Manufacturer – Antique Street Lamps or approved equal.
- Pole – EPAX 24 S5S7 4-3/8T8 CM with handhole and the following pole accessories: (4) banner bolt-on arms, 1" x 18", 4BAB 18 H4 CM, location at 12' and 17' AFG, confirm street side mounting
- Pendant Arm (1) – EAL5/1 (confirm orientation prior to order placement)

Finish of light pole and pendant arm, special, (decorative ornamental) shall match existing adjacent uptown poles in the area. Confirm (RAL 7022 color) details with Owner prior to order placement.

Installation

This work shall be in accordance with Section 830 of the Standard Specifications.

Basis of Payment

This work will be paid for at the contract unit price each for LIGHT POLE, SPECIAL, (DECORATIVE ORNAMENTAL) acceptably completed. This price shall include proper installation of the light pole to the concrete base. Concrete foundation shall be paid for separately. This work shall include the pendant arm and connecting the arm to the proposed light pole. Electric cable and luminaires shall be paid for separately.

X0323950 LUMINAIRE, METAL HALIDE, 175 WATT

Description

This work shall consist of furnishing, transporting, installing, and wiring luminaire, metal halide, 175 watt.

Materials

Light fixture head shall be a 175 metal halide, IES type II optic with house side shield, 120V, with features as follows:

- Manufacturer – Antique Street Lamps or approved equal.
- Fixture Head – EM17RT 175M MED GCF SR2 120 CM HS

Finish of luminaire, metal halide, pendant mount, 175 watt shall match existing adjacent uptown fixtures in the area. Confirm (RAL 7022 color) details with Owner prior to order placement.

Electrical devices shall be assembled in the United States of America and carry Underwriters' Laboratory labels. Materials must be approved by the Town of Normal before ordering.

Installation

This work shall be in accordance with Section 821 of the Standard Specifications.

Basis of Payment.

This work will be paid for at the contract unit price each for LUMINAIRE, METAL HALIDE, 175 WATT acceptably completed. This price shall include installing fixture and connecting the unit to the proposed electric cable. Electric cable shall be paid for separately.

X0327066 IN-GRADE FIXTURE FOR UPLIGHTING

Description

This work shall consist of furnishing, transporting, installing, and wiring in-grade fixture for uplighting.

Materials

Light fixture shall be a 39W metal halide drive-over in grade fixture as follows:

- Manufacturer – Bega-US or approved equal.
- Fixture Head – 8856 MH
- Lamp – (1) 39W T4 G8.5 MH

Provide water tight cast iron box with cover sized as required below each drive over luminaire. Install per fixture manufacturer's instructions and NEC.

Electrical devices shall be assembled in the United States of America and carry Underwriters' Laboratory labels. Materials must be approved by the Town of Normal before ordering.

Installation

This work shall be in accordance with Section 821 of the Standard Specifications. Install per manufacturer's instructions, the plans, and details.

Basis of Payment

This work will be paid for at the contract unit price each for IN-GRADE FIXTURE FOR UPLIGHTING acceptably completed. This price shall include installing fixture and connecting the unit to the proposed electric cable. Electric cable shall be paid for separately.

X8360120 LIGHT POLE FOUNDATION, SPECIAL

Description

This work shall consist of furnishing and installing a concrete foundation of the depth and size

detailed on the plans, in accordance with the applicable articles of Section 836 of the Standard Specifications, and the following modifications.

The tinted concrete and reinforcement bar materials and construction requirements shall be in accordance with the requirements of the special provision for RETAINING WALLS as specified herein.

The Contractor will be responsible for matching the light pole's bolt circle as provided by the manufacturer.

Measurement and Payment

This work will be paid for at the contract unit price per each for LIGHT POLE FOUNDATION, SPECIAL, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

X8950130 MODIFY EXISTING LIGHTING CONTROLLER

The contractor shall comply with applicable parts of Sections 825 and 1068 of the Standard Specifications for Road and Bridge Construction with the following exceptions:

Description.

This work shall consist of providing all material and labor required to modify lighting controller #01 and adjacent hand holes at the location as shown on the plans.

Materials.

Provide materials listed on the plans and as required to modify lighting controller as described on the plans and the Landscape Lighting Wiring Diagram, including the remote transformer – 300-LG3 for powering the wall mounted step lights (circuits W1-W4).

Installation.

All components shall be assembled, mounted, and connected per the plans. The assembled and installed equipment shall be adjusted, tested, and demonstrated to be operating properly before acceptance. This item includes any excavation and drilling required for the installation of new conduit into existing hand holes adjacent to the controller. Compliance with all applicable codes is required. Any required owner training of this equipment shall be performed by this Contractor under this special provision.

Basis of Payment

This work will be paid for at the contract unit price per each MODIFY EXISTING LIGHTING CONTROLLER acceptably completed, which shall be payment in full for the work shown.

XX007469 UPLIGHTS

Description

This work shall consist of furnishing, transporting, installing, and wiring uplights at the flagpole location shown on the plans.

Materials

Light fixture uplights shall be have 2 variants as follows:

Variant 1 (Qty 2)
- Manufacturer – B-K Lighting or approved equal.
- Fixture Head – A-HP2-AR35-TR-270-BRU-11-120-CPC/AH/ICEE/TC
- Lamp – (1) 270-CDM-RIII/35W/810MH/10° Spot

Variant 2 (Qty 1)
- Manufacturer – B-K Lighting or approved equal.
- Fixture Head – A-HP2-AR35-TR-271-BRU-11-120-CPC/AH/ICEE/TC
- Lamp – (1) 271-CDM-RIII/35W/830MH/24° Narrow Flood

Verify location of each Variant with landscape architect prior to installation.

Electrical devices shall be assembled in the United States of America and carry Underwriters' Laboratory labels. Materials must be approved by the Town of Normal before ordering.

Installation

This work shall be in accordance with Section 821 of the Standard Specifications. Install per manufacturer's instructions, the plans, and details.

Basis of Payment
This work will be paid for at the contract unit price each for UPLIGHTS acceptably completed. This price shall include installing fixture and connecting the unit to the proposed electric cable. Electric cable shall be paid for separately.

CONDUIT EMBEDDED IN STRUCTURE, 1/2" DIA., PVC

Description

This work shall consist of furnishing and installing PVC conduits of the size specified at locations shown on the plans and in accordance with the applicable articles of Section 812 of the Standard Specifications.

Basis of Payment

This work will be paid for at the contract unit price per foot for CONDUIT EMBEDDED IN STRUCTURE, 1/2" DIA., PVC, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 14

Description

This work shall consist of furnishing, transporting, and installing in conduit the electric cable in conduit, 600V (XLP-Type USE) 1/C No. 14.

Materials

Electric cable shall be supplied in accordance with Sections 817 and 1066 of the Standard Specifications.

Installation

This work shall be in accordance with Section 817 of the Standard Specifications. Install electric cable in conduit, 600V (XLP-Type USE) 1/C No. 14 at locations shown on the plans and details.

Basis of Payment

This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 14. Measurements will be made in straight lines between changes in direction and to the centers of equipment and boxes access points. 10 ft of extra cable will be allowed when terminating at a controller. 5 ft of extra cable will be allowed at light fixture, handholes, pull boxes, junction boxes, as similar locations. For 12 VDC systems, the actual amount of slack left at the controller, handhole and other access locations shall be determined by voltage drop such that the voltage reading at each fixture shall be in the range required for proper operation of the fixture.

XX008207 LIGHTS, PEDESTRIAN

Description

This work shall consist of furnishing, transporting, installing, and wiring wall mounted pedestrian step lights.

Materials

Light fixture shall be a 10W 12V DC recessed wall fixture with shielded light as follows:

- Manufacturer – Bega-US or approved equal.
- Fixture Head – 2100 color to be selected by owner.
- Lamp – (1) 10W T3 G4, 12V
- Remote Transformer – 300-LG3 (Mount inside Lighting Controller) shall be included in the "Modify Existing Lighting Controller" bid item.

Electrical devices shall be assembled in the United States of America and carry Underwriters' Laboratory labels. Materials must be approved by the Town of Normal before ordering.

Installation

This work shall be in accordance with Section 821 of the Standard Specifications. Install per manufacturer's instructions, the plans, and details.

Basis of Payment

This work will be paid for at the contract unit price each for LIGHTS, PEDESTRIAN, acceptably completed. This price shall include installing fixture and connecting the unit to the proposed electric cable. Electric cable shall be paid for separately.

X8950205 REBUILD EXISTING HANDHOLE, SPECIAL

Description

This work consists of partial removal of existing handholes and the construction of a concrete handhole enclosure with two access doors at the location shown in the plans and in accordance with the details shown in the plans and as directed by the Engineer.

Materials

The access doors shall be aluminum single leaf type, 3'-0" x 3'-0", Type K4, as manufactured by the Bilco Company, P.O. Box 1203, New Haven, CT 06505, telephone number 203-934-6363 or approved equal.

The Contractor shall submit shop drawings of the access doors to the Engineer for approval prior to ordering the materials.

Construction Requirements

The Contractor shall excavate, saw cut and remove the tops of the existing concrete handholes to an elevation above the existing conduits. The materials shall be disposed of off the site. The existing conduits and cables shall remain in service and be protected and shall not be removed. Any damaged conduits or cables shall be replaced at the Contractor's expense and no additional compensation will be allowed.

A new concrete handhole with access doors shall be constructed around the existing handholes to provide an enclosure with access to the existing conduits and cables. The access doors shall be installed per the manufacture's recommendations. The concrete handhole construction and materials shall be in accordance with the details shown in the plans and the applicable portions of Sections 502, 503, and 508 of the Standard Specifications, and as directed by the Engineer. The excavation shall be backfilled with topsoil material.

Basis of Payment

This work will be paid for at the contract unit price each for REBUILD EXISTING HANDHOLE, SPECIAL, which price shall include all labor, equipment and materials necessary to perform the work as specified including structure excavation, concrete, reinforcement bars, access doors, removal and disposal of surplus materials and protection of existing conduits and cables.

LANDSCAPE AND STREETSCAPE SPECIFICATIONS

GENERAL SPECIFICATIONS

METAL FABRICATIONS

PART 1 - GENERAL

DESCRIPTION

A This Work shall consist of miscellaneous steel framing to include the following:

1. Steel framing and supports for mechanical and electrical equipment.
2. Steel framing and supports for applications where framing and supports are not specified.
3. Metal treads.
4. Loose bearing and leveling plates for applications where they are not specified in other Sections.

PERFORMANCE REQUIREMENTS

B Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F , ambient; 180 deg F , material surfaces.

SUBMITTALS

A Product Data: For the following:

1. Paint products.
2. Metal treads.
3. Grout.

B Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

C Samples for Verification: For each type and finish of tread

D Welding certificates.

QUALITY ASSURANCE

A Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."

PROJECT CONDITIONS

A Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

COORDINATION

A Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B Coordinate installation of anchorages and steel weld plates and angles for casting into concrete. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - MATERIALS

METALS, GENERAL

A Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

FERROUS METALS

A Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B Steel Tubing: ASTM A 500, cold-formed steel tubing.

C Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless otherwise indicated.

D Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

NONFERROUS METALS

A Aluminum Plate and Sheet: ASTM B 209 , Alloy 6061-T6.

B Aluminum Extrusions: ASTM B 221 , Alloy 6063-T6.

C Aluminum Castings: ASTM B 26/B 26M, Alloy 443.0-F.

FASTENERS

A General: Unless otherwise indicated, provide Type 316 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 , Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.

B Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A ; with hex nuts, ASTM A 563 ; and, where indicated, flat washers.

C Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563; and, where indicated, flat washers.

1. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.

D Eyebolts: ASTM A 489.

E Machine Screws: ASME B18.6.3 .

F Lag Screws: ASME B18.2.1 .

G Wood Screws: Flat head, ASME B18.6.1.

H Plain Washers: Round, ASME B18.22.1 .

I Lock Washers: Helical, spring type, ASME B18.21.1 .

J Anchors, General: Anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

K Cast-in-Place Anchors in Concrete: Either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, all hot-dip galvanized per ASTM F 2329.

L Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors.

1. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 2 stainless-steel bolts, ASTM F 593 , and nuts, ASTM F 594 .

MISCELLANEOUS MATERIALS

A Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy

welded.

B Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

C Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

D Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

FABRICATION, GENERAL

A Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D Form exposed work with accurate angles and surfaces and straight edges.

E Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

F Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.

G Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.

I Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches , with a minimum 6-inch embedment and 2-inch hook, not less than 8 inches from ends and corners of units and 24 inches o.c., unless otherwise indicated.

MISCELLANEOUS FRAMING AND SUPPORTS

A General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

1. Furnish inserts for units installed after concrete is placed.

C Galvanize miscellaneous framing and supports where indicated.

METAL TREADS

A Non-Slip Metal Bars for Treads: Aluminum, with abrasive filler consisting of aluminum oxide, silicon carbide, or a combination of both, in an epoxy-resin binder. Fabricate units in lengths necessary to accurately fit openings or conditions.

1. Basis-of-Design: Non-slip metal bars for treads are based on Model AS-2 by Balco Inc. or a comparable product approved by Engineer.
2. Provide solid-abrasive-type units without ribs to be set in mastic.
3. Color: Saftely Glo or as directed by Engineer

B Apply clear lacquer to concealed surfaces of extruded units

FINISHES, GENERAL

A Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B Finish metal fabrications after assembly.

C Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

ALUMINUM FINISHES

A Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B As-Fabricated Finish: AA-M10 (Mechanical Finish: as fabricated, unspecified).

STEEL AND IRON FINISHES

A Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.

1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

B Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

1. Shop prime with universal shop primer unless otherwise indicated.

C Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

D Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

PART 3 - CONSTRUCTION REQUIREMENTS

INSTALLATION, GENERAL

A Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.

4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

E Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

ADJUSTING AND CLEANING

A Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

B Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

PART 4 - MEASUREMENT AND PAYMENT

A METAL FABRICATIONS work will be incidental to steel framing and supports for mechanical and electrical equipment, metal treads for steps, bearing and leveling plates, and pipe and tube railings, and other miscellaneous framing and supports necessary and will include layout, fabrication and other labor or equipment required to complete this work, and not additional compensation will be allowed.

END OF SECTION

HOT FLUID-APPLIED WATERPROOFING

PART 1 - GENERAL

DESCRIPTION

A This Section includes the following:

1. Protected, hot fluid-applied waterproofing membrane, reinforced at retaining walls.

PERFORMANCE REQUIREMENTS

A Install hot fluid-applied waterproofing and flashing system with compatible components that will not permit passage of liquid and will withstand flotation loads, thermally induced movement, and exposure to weather without failure.

SUBMITTALS

A Product Data: For each type of waterproofing material indicated.

B Shop Drawings: Show locations and extent of waterproofing. Include plans, sections, details, and attachments to other Work, for substrate joints and cracks, flashing sheets, vertical intersections, and membrane terminations.

C Samples for Verification: For each of the following products:
1. 12-by-12-inch square of flashing sheet.

D Installer Certificates: Signed by manufacturers certifying that installers comply with requirements.

E Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for current formulation of hot fluid-applied waterproofing.

F Inspection Report for Information: Copy of waterproofing system manufacturer's inspection report of completed waterproofing membrane.

QUALITY ASSURANCE

A Installer Qualifications: The waterproofing contractor shall demonstrate qualifications to perform the work of this section by submitting the following documentation:

1. Certification or license by the membrane manufacturer as a locally based, authorized applicator of the product the installer intends to use, for a minimum of five years.
2. List of at least three projects, satisfactorily completed within the past five

years, of similar scope and complexity to this project. Previous experience submittal shall correspond to specific membrane system proposed for the use by applicator.

B Source Limitations: Obtain complete waterproofing assembly through one source from a single manufacturer.

C Preinstallation Conference: Conduct conference at Project site. Review methods and procedures related to waterproofing system including, but not limited to, the following:

1. Review structural load limitations of deck during and after waterproofing.
2. Review flashing, special waterproofing details, and condition of other construction that will affect waterproofing.
3. Review regulations and requirements of authorities having jurisdiction for insurance, certifications, and inspection and testing, if applicable.
4. Review temporary protection requirements for waterproofing system during and after installation.

DELIVERY, STORAGE, AND HANDLING

A Deliver materials to Project site in original containers with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.

1. Handle and store waterproofing materials and place equipment in a manner to avoid significant or permanent damage to deck or structural supporting members.

PROJECT CONDITIONS

A Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended by waterproofing system manufacturer. Do not apply waterproofing to a damp or wet substrate or when temperature is below 0 deg F.

1. Do not apply waterproofing in snow, rain, fog, or mist.

WARRANTY

A Special Waterproofing Membrane Manufacturer's Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace waterproofing that does not remain watertight and base flashing that does not remain watertight or that splits, tears, or separates at seams or from substrate within specified warranty period.

1. Warranty does not include failure of waterproofing membrane due to formation of new joints and cracks in roof deck in excess of 1/8 inch wide.
2. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - MATERIALS

MANUFACTURERS

A Products: Subject to compliance with requirements, provide one of the following:

1. American Hydrotech, Inc.; Monolithic Membrane 6125.
2. Barrett Company; Ram-Tough 250.
3. Henry Company, Monsey Div.; Elasto-Seal 790-11.

WATERPROOFING MEMBRANE

A Single-component, 100 percent solids, hot fluid-applied, rubberized asphalt, complying with the general requirements and the following physical requirements in CGSB-37.50, "Hot Applied, Rubberized Asphalt for Waterproofing," as demonstrated by testing performed by a qualified independent testing agency of manufacturer's current waterproofing formulations:

1. Flash Point: Not less than 260 deg C or not less than 25 deg C above manufacturer's maximum recommended application temperature.
2. Cone Penetration: 110 maximum at 25 deg C and 200 maximum at 50 deg C.
3. Flow: 3 mm maximum at 60 deg C.
4. Toughness: Not less than 5.5 J.
5. Ratio of Toughness to Peak Load: Not less than 0.040.
6. Adhesion Rating: Pass.
7. Water-Vapor Permeance: 1.7 ng/Pa x s x sq. m.
8. Water Absorption: 0.35-g maximum mass gain or 0.18-g maximum mass loss.
9. Pinholing: Not more than one pinhole.
10. Low-Temperature Flexibility: No cracking.
11. Crack Bridging Capability: No cracking, splitting, or loss of adhesion.
12. Heat Stability: Comply with requirements for penetration, flow, low-temperature flexibility, and viscosity when heated for five hours at manufacturer's recommended application temperature.
13. Viscosity Test: 2 to 15 seconds.

AUXILIARY MATERIALS

A General: Furnish auxiliary materials recommended by waterproofing system manufacturer for intended use and compatible with waterproofing.

1. Furnish liquid-type auxiliary materials that meet VOC limits of authorities having jurisdiction.

B Primer: ASTM D 41, asphaltic primer.

C Elastomeric Flashing Sheet: 60-mil- thick, minimum, nonstaining, uncured sheet neoprene with manufacturer's recommended contact adhesives. Comply with the following:

1. Tensile Strength: 1400 psi minimum; ASTM D 412, Die C.
2. Elongation: 300 percent minimum; ASTM D 412.
3. Tear Resistance: 125 psi minimum; ASTM D 624, Die C.
4. Brittleness: Does not break at minus 30 deg F; ASTM D 2137.

D Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum termination bars, approximately 1 by 1/8 inch thick; with anchors.

E Reinforcing Fabric: Manufacturer's recommended spun-bonded polyester fabric.

PART 3 - CONSTRUCTION REQUIREMENTS

EXAMINATION

A Examine substrates, areas, and conditions under which waterproofing will be applied, with Installer present, for compliance with requirements and other conditions affecting performance.

1. Proceed with installation only after minimum concrete drying period recommended by waterproofing system manufacturer has passed.
2. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION

A Clean and prepare substrate according to manufacturer's written recommendations. Provide clean, dust-free, and dry substrate for waterproofing application.

B Mask off adjoining surfaces not receiving waterproofing to prevent spillage from affecting other construction.

C Protect penetrations to prevent spillage and migration of waterproofing fluids.

D Remove grease, oil, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.

E Remove fins, ridges, and other projections and fill honeycomb, aggregate pockets, and other voids.

JOINTS, CRACKS, AND TERMINATIONS

A Prepare and treat substrates to receive waterproofing membrane, including joints and cracks, roof drains, and penetrations, according to CGSB-37.51, "Application of Rubberized

Asphalt, Hot-Applied, for Waterproofing," and waterproofing system manufacturer's written instructions.

1. Rout and fill joints and cracks in substrate. Before filling, remove dust and dirt according to ASTM D 4258.
2. Adhere strip of elastomeric flashing sheet to substrate in a layer of hot fluid-applied, rubberized asphalt. Extend flashing sheet a minimum of 6 inches on each side of moving joints and cracks or joints and cracks exceeding 1/8 inch thick, and beyond roof drains and penetrations. Apply second layer of hot fluid-applied, rubberized asphalt over elastomeric flashing sheet.
3. Embed strip of reinforcing fabric into a layer of hot fluid-applied, rubberized asphalt. Extend reinforcing fabric a minimum of 6 inches on each side of nonmoving joints and cracks not exceeding 1/8 inch thick, and beyond roof drains and penetrations.

    a. Apply second layer of hot fluid-applied, rubberized asphalt over reinforcing fabric.

B At expansion joints and discontinuous deck-to-wall or deck-to-deck joints, bridge joints with elastomeric flashing sheet extended a minimum of 6 inches on each side of joints and adhere to substrates in a layer of hot fluid-applied, rubberized asphalt. Apply second layer of hot fluid-applied, rubberized asphalt over elastomeric reinforcing sheet.

BASE FLASHING INSTALLATION

A Install base flashing at terminations of waterproofing membrane according to CGSB-37.51, "Application of Rubberized Asphalt, Hot-Applied, for Waterproofing," and waterproofing system manufacturer's written instructions.

B Prime substrate with asphalt primer if required by waterproofing membrane manufacturer.

C Bond elastomeric flashing sheet in adhesive against wall substrate to within 3 inches of deck. Adhere remaining vertical leg and horizontal leg of flashing sheet in a layer of hot fluid-applied, rubberized asphalt.

WATERPROOFING MEMBRANE APPLICATION

A Apply primer, at manufacturer's recommended rate, over prepared substrate and allow to dry.

B Heat and apply rubberized asphalt according to CGSB-37.51, "Application of Rubberized Asphalt, Hot-Applied, for Waterproofing," and manufacturer's written instructions.

1. Heat rubberized asphalt in an oil- or air-jacketed melter with mechanical agitator specifically designed for heating rubberized asphalt.

C Reinforced Membrane: Apply hot fluid-applied, rubberized asphalt to area to receive waterproofing. Spread a 90-mil- thick layer of hot fluid-applied, rubberized asphalt; embed reinforcing fabric, overlapping sheets 2 inches; and spread another 125-mil- thick layer of hot fluid-applied, rubberized asphalt to form a uniform, reinforced, seamless membrane, 215 mils thick.

D Apply hot fluid-applied, rubberized asphalt over prepared joints and up wall terminations and vertical surfaces to heights indicated or required by manufacturer.

E Cover waterproofing membrane with separator sheet with overlapped joints while rubberized asphalt is still hot and before waterproofing membrane is subject to traffic.

FIELD QUALITY CONTROL

A Engage a qualified testing agency to observe flood tests and to determine and report leaks.

B Flood Testing: Flood test each deck area for leaks, according to recommendations in ASTM D 5957, after completing waterproofing and flashing, but before overlying construction is placed. Install temporary containment assemblies, plug or dam drains, and flood with potable water.

1. Flood to an average depth of 2-1/2 inches with a minimum depth of 1 inch and not exceeding a depth of 4 inches. Maintain 2 inches of clearance from top of base flashing.
2. Flood each area for 48 hours.
3. After flood testing, repair leaks, repeat flood tests, and make further repairs until waterproofing and flashing installation is watertight.

C Final Inspection: Arrange for waterproofing system manufacturer's technical personnel to inspect waterproofing installation on completion of waterproofing membrane and flashing.

1. Notify Engineer 48 hours in advance of date and time of inspection.

D Correct deficiencies in or remove waterproofing that does not comply with requirements, repair substrates, reapply waterproofing, and repair flashing.

1. After flood tests, repair leaks and make further repairs until waterproofing installation is watertight.

E Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with requirements.

PROTECTING AND CLEANING

A Protect waterproofing according to manufacturer's written recommendations to prevent damage and wear during application and remainder of construction period.

B Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

PART 4 - MEASUREMENT AND PAYMENT

A HOT FLUID APPLIED WATERPROOFING will not be measured for payment but will be considered included in the cost of the various pay items requiring waterproofing and shall include all labor, materials and equipment required to perform the work as specified, and no additional compensation will be allowed.

END OF SECTION

JOINT SEALANTS

PART 1 - GENERAL

DESCRIPTION

A This Work shall be performed in accordance with Section 503 of the Standard Specification (IDOT) and as modified herein to include the following:

1. Joint sealants for the applications indicated in the Joint-Sealant Schedule at the end of the section, and as indicated on Drawings.

PERFORMANCE REQUIREMENTS

A Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

SUBMITTALS

A Product Data: For each joint-sealant product indicated.

B Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

D Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.

E SWRI Validation Certificate: For each elastomeric sealant specified to be validated by SWRI's Sealant Validation Program.

F Preconstruction Field Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on preconstruction testing specified in "Quality Assurance" Article.

G Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:

1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
2. Interpretation of test results and written recommendations for primers and

substrate preparation needed for adhesion.

H Field Test Report Log: For each elastomeric sealant application.

I Product Test Reports: Based on comprehensive testing of product formulations performed by a qualified testing agency, indicating that sealants comply with requirements.

J Warranties: Special warranties specified in this Section.

QUALITY ASSURANCE

A Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.

B Source Limitations: Obtain through one source from a single manufacturer.

C Manufacturer Representative: Manufacturer's technical representative shall be on site at the start of the work and periodically with the work progresses, and at time of testing or completion of the work.

D Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.

1. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
2. Submit pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
5. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

E Product Testing: Obtain test results for "Product Test Reports" Paragraph in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period preceding the commencement of the Work.

1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.

2. Test elastomeric joint sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.
3. Test elastomeric joint sealants according to SWRI's Sealant Validation Program for compliance with requirements specified by reference to ASTM C 920 for adhesion and cohesion under cyclic movement, adhesion-in-peel, and indentation hardness.

F Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to Project joint substrates as follows:

1. Locate test joints where indicated on Project or, if not indicated, as directed by Engineer.
2. Conduct field tests for each application indicated below:

   a. Each type of elastomeric sealant and joint substrate indicated.

3. Notify Engineer seven days in advance of dates and times when test joints will be constructed.
4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.

   a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193.

      For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.

5. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

PROJECT CONDITIONS

A Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits

permitted by joint-sealant manufacturer or are below 40 deg F.

2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

WARRANTY

A Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - MATERIALS

MANUFACTURERS

A Products: Subject to compliance with requirements, provide one of the products listed below.

MATERIALS, GENERAL

A Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

B Colors of Exposed Joint Sealants: Refer to Sealant at the end of this section.

ELASTOMERIC JOINT SEALANTS

A Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

B Stain-Test-Response Characteristics: Provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

C Suitability for Immersion in Liquids. Where elastomeric sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247 and qualify for the length of exposure indicated by

reference to ASTM C 920 for Class 1 or 2. Liquid used for testing sealants is deionized water, unless otherwise indicated.

D Single-Component Low Modulus, Neutral- and Basic-Curing Silicone Sealant:

1. Products:

   a. Dow Corning Corporation; 790.
   b. GE Silicones; SilPruf LM SCS2700.
   c. Tremco; Spectrem 1 (Basic).
   d. GE Silicones; SilPruf SCS2000.
   e. Sonneborn, Division of ChemRex Inc.; Omniseal.

2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 100/50.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.

   a. Use O Joint Substrates: Coated glass aluminum coated with a high-performance coating brick granite and other Use O substrates.

6. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.

E Single-Component Medium Modulus, Neutral- and Basic-Curing Silicone Sealant:

   a. Dow Corning Corporation; 791.
   b. Dow Corning Corporation; 795
   c. GE Silicones; SilPruf NB SCS9000.
   d. GE Silicones; UltraPruf II SCS2900.

2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 50 100/50.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.

   a. Use O Joint Substrates: Coated glass aluminum coated with a high-performance coating brick granite and other Use O substrates.

6. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.

F Multicomponent Nonsag Urethane Sealant:

1. Products:
   a. Sika Corporation, Inc.; Sikaflex - 2c NS TG.
   b. Sonneborn, Division of ChemRex Inc.; NP 2.
   c. Tremco; Vulkem 227.
   d. Tremco; Vulkem 322 DS.

2. Type and Grade: M (multicomponent) and NS (nonsag).
3. Class: 25.
4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
5. Uses Related to Joint Substrates: M, A, and, O as applicable to joint substrates indicated.

G Single-Component Nonsag Urethane Sealant:

1. Products:

   a. Sika Corporation, Inc.; Sikaflex - 1a.
   b. Sonneborn, Division of ChemRex Inc.; NP 1.
   c. Tremco; Vulkem 116.

2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 25.
4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
5. Uses Related to Joint Substrates: M, A, and O, as applicable to joint substrates indicated.

JOINT-SEALANT BACKING

A General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B Cylindrical Sealant Backings: ASTM C 1330, Type B (bicellular material with a surface skin) as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

1. Provide one of the following:

   a. "Sof Rod" by Nomaco
   b. "Soft Backer Rod" by Sonneborn.

C Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing

complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.

D Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

MISCELLANEOUS MATERIALS

A Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - CONSTRUCTION REQUIREMENTS

EXAMINATION

A Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION

A Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean,

sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

a. Concrete.
b. Masonry.

3. Remove laitance and form-release agents from concrete.
4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:

a. Metal.

B Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

INSTALLATION OF JOINT SEALANTS

A General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D Install bond-breaker tape behind sealants where sealant backings are not used between

sealants and backs of joints.

E Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
   a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

CLEANING

A Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

PROTECTION

A Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

SEALANT SCHEDULE

TYPE	POLYMER	EXPOSURE /TRAFFIC	COLOR	USES/APPLICATIONS
Elastomeric	Silicone: Low modulus; Medium Modulus	Exterior joints in vertical surfaces and non-traffic horizontal surfaces	Selected by Engineer from manufacturer's full range	• Control and expansion joints in cast-in-place concrete. • Joints in precast concrete. • Joints between materials listed above and frames of doors and windows. • Other joints as indicated.
Elastomeric	Two-part Urethane or One-part Urethane	Exterior joints in horizontal traffic surfaces	Selected by Engineer from manufacturer's full range	• Control, expansion, and isolation joints in cast-in-place concrete slabs. • Joints in paving. • Other joints as indicated.

PART 4 - MEASUREMENT AND PAYMENT

A JOINT SEALANTS will not be measured for payment but will be considered included in the cost of the various pay items requiring joints and shall include all labor, materials and equipment required to perform the work as specified, and no additional compensation will be allowed.

END OF SECTION

CRUSHED STONE

PART 1 - GENERAL

A SUMMARY

B Crushed Stone shall be used in locations indicated on the Landscape Plans.

1.2 SUBMITTALS

A Products: Five (5) lb. sample and sieve analysis of Type 1 Crushed Stone for grading and color for Engineer approval.

B Products: Five (5) lb. sample and sieve analysis of "Screenings" for grading and color for Engineer approval.

1.3 TESTS

A Perform gradation of Crushed Stone in accordance with ASTM C 136 – Method for Sieve Analysis for Fine and Course.

B Type 1 Crushed Stone is to be tested for approval with Stabilizer at Stabilizer Solutions, Inc., 1-800-336-2468 or other approved equal stabilizer manufacturer, prior to installation.

1.4 ENVIRONMENTAL CONDITIONS

A. Do not install Crushed Stone Pavement during rainy conditions on cold days under 40° Fahrenheit.

1.5 QUALITY ASSURANCE

A Installer to provide evidence to indicate successful experience in providing Crushed Stone Pavement containing Stabilizer binder additive.

1.6 EXCESS MATERIALS

A Provide Owner with the following excess materials for use in future crushed stone pavement repair:

1. 50 lb. Bags of the Type 1 crushed stone.
2. 40 lb. Bag of the Stabilizer additive

PART 2 - MATERIALS

2.1 CRUSHED STONE

A Type 1 Crushed Stone is to be 'Starlite Black Granite'mixed with Stabilizer Binder.

1. Stone and Stablizer to be from Kafka Granite, 101 South Weber Ave, Stratford WI, 54484

2. Crushed Stone shall be free of all soil, organic matter, and other deleterious material. Crushed Stone shall be comprised of a uniform parent base material.

B Crushed Stone Sieve Analysis Percentage of Weight Passing a Square Mesh Sieve AASHTO T11-82 and T27-82.

¼" MINUS AGGREGATE GRADATION

Sieve Designation	Range of % Passing
3/8"	100
No. 4	95 – 100
No. 8	75 –80
No. 16	55 – 65
No. 30	40 – 50
No. 50	25 – 35
No. 100	20 – 25
No. 200	5 - 15

2.2 STABILIZER BINDER

A Patented, non-toxic organic binder that is a colorless and odorless concentrated power that naturally binds crushed 3/8" or 1/4 " minus aggregate together to produce a firm surface.

B Provided by Stabilizer Solutions, Inc. 1-800-336-2468 or approved equal.

PART 3 - EXECUTION

3.1 BLENDING STABILIZER WITH CRUSHED STONE

A Blend 10-14 lbs. (exact quantity to be determined by testing) of Stabilizer per ton of decomposed granite. It is critical that Stabilizer be thoroughly and uniformly mixed throughout decomposed granite.

B Blend as per manufacturer's specifications.

3.2 PLACEMENT OF CRUSHED STONE WITH STABILIZER

A Upon thorough moisture penetration, compact aggregate screenings to 95% relative compaction with equipment such as: double drum roller (2-4 ton) or single drum roller (1000

lbs.) vibratory plate tamp. Do not begin compaction for 6 hours but no later than 48 hours after placement

B Take care in compacting decomposed granite when adjacent planting, paving and irrigation systems.

3.3 REPAIRS AND PROTECTION OF CRUSHED STONE WITH STABILZER

A Remove and replace Crushed Stone that is damaged, defective or does not meet requirements of this section.

PART 4 - MEASUREMENT AND PAYMENT:

4.1 CRUSHED STONE will not be measured for payment but will be considered included in the cost of the unit pavers or various pay items requiring crushed stone and shall include all labor, materials and equipment required to perform the work as specified, and no additional compensation will be allowed.

END OF SECTION

50901760 PIPE HANDRAIL

PART 1 - GENERAL

DESCRIPTION

A This Work shall be performed in accordance with Section 503 of the Standard Specification (IDOT) and as modified herein to include the following:

1. Aluminum tube railings.

PERFORMANCE REQUIREMENTS

A Delegated Design: Design railings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:

1. Aluminum: The lesser of minimum yield strength divided by 1.65 or minimum ultimate tensile strength divided by 1.95.

C Structural Performance: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

   a. Uniform load of 50 lbf/ ft. applied in any direction.

   b. Concentrated load of 200 lbf applied in any direction.

   c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

   a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft. Infill load and other loads need not be assumed to act concurrently.

D Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F , ambient; 180 deg F , material surfaces.

E Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

SUBMITTALS

A Product Data: For the following:

1. Manufacturer's product lines of mechanically connected railings.
2. Grout, anchoring cement, and paint products.

B Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C Samples for Verification: For each type of exposed finish required.

1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters.
2. Fittings and brackets.
3. Assembled Sample of railing system, made from full-size components, including top rail, post, handrail, and infill. Sample need not be full height.

    a. Show method of finishing and connecting members at intersections.

D Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

E Welding certificates.

F Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers certifying that shop primers are compatible with topcoats.

G Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

QUALITY ASSURANCE

A Source Limitations: Obtain each type of railing from single source from single manufacturer.

B Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."

PROJECT CONDITIONS

A Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

COORDINATION AND SCHEDULING

A Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - MATERIALS

METALS, GENERAL

A Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

ALUMINUM

A Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of alloy and temper designated below for each aluminum form required.

B Extruded Structural Round Tubing: ASTM B 429/B 429M, Alloy 6063-T6.

FASTENERS

A General: Provide the following:

1. Aluminum Railings: Type 316 stainless-steel fasteners.

B Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.

C Fasteners for Interconnecting Railing Components:

1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless otherwise indicated.
2. Provide tamper-resistant square or hex socket flat-head machine screws for exposed fasteners unless otherwise indicated.

D Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

1. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 2 stainless-steel bolts, ASTM F 593 , and nuts, ASTM F 594 .

MISCELLANEOUS MATERIALS

A Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

1. For aluminum railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

B Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

C Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

FABRICATION

A General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

C Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

D Form work true to line and level with accurate angles and surfaces.

E Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

F Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G Connections: Fabricate railings with either welded or nonwelded connections unless otherwise indicated.

H Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.

3. Remove flux immediately.
4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

I Welded Connections for Aluminum Pipe: Fabricate railings to interconnect members with concealed internal welds that eliminate surface grinding, using manufacturer's standard system of sleeve and socket fittings.

J Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

1. Fabricate splice joints for field connection using an epoxy structural adhesive if this is manufacturer's standard splicing method.

K Form changes in direction as follows:

1. By bending or by inserting prefabricated elbow fittings.

L Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

M Close exposed ends of railing members with prefabricated end fittings.

N Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

O Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

FINISHES, GENERAL

A Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

ALUMINUM FINISHES

A Clear Anodic Finish, Base Bid: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

B Baked-Enamel or Powder-Coat Finish, Alternate Bid: AAMA 2603 except with a minimum dry film thickness of 1.5 mils . Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

1. Color and Gloss: Match Engineer's sample.

PART 3 - CONSTRUCTION REQUIREMENTS

INSTALLATION, GENERAL

A Fit exposed connections together to form tight, hairline joints.

B Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet .
3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet .

C Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

D Adjust railings before anchoring to ensure matching alignment at abutting joints.

E Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

RAILING CONNECTIONS

A Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.

B Welded Connections: Use fully welded joints for permanently connecting railing

components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.

C Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches beyond joint on either side, fasten internal sleeve securely to one side, and locate joint within 6 inches of post.

ANCHORING POSTS

A Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.

B Cover anchorage joint with flange of same metal as post, welded to post after placing anchoring material.

ADJUSTING AND CLEANING

A Clean aluminum by washing thoroughly with clean water and soap and rinsing with clean water.

B Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

PROTECTION

A Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

PART 4 - MEASUREMENT AND PAYMENT

A Pipe and tube railings will be paid for at the contract unit price per foot for PIPE HANDRAIL, which shall include the entire length of the railing including all horizontal and vertical members including railings that are embedded for anchorage. The price will be payment in full for all labor, material, equipment and services necessary for furnishing and installing the PIPE HANDRAIL including any concrete footings, core drilling and epoxy glue required, and no additional compensation will be allowed.

END OF SECTION

K0012990, PERENNIAL PLANTS, ORNAMENTAL TYPE, GALLON POT
PERENNIAL PLANTS, ORNAMENTAL TYPE, 5-GALLON POT

This work shall consist of furnishing, transporting and planting perennial plants in accordance with Section 254 of the Standard Specifications and as modified herein. These specifications, along with contract drawings and lists of plant materials, apply to those items necessary for and incidental to the preparation, execution, completion and maintenance of the landscape planting activities (excluding lawn areas) specified in the contract. The scope includes the planting perennials, annuals, and bulbs, and the maintenance activities of fertilizing, pruning and watering.

REFERENCES

American Standards for Nursery Stock, ANSI Z60.1, current edition. American Association of Nurserymen, Inc.

Standardized Plant Names, Second Edition (1942). American Joint Committee on Horticulture Nomenclature, Horace McFarland Company, Harrisburg, PA.

American National Standard for Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance-Standard Practices, ANSI A300, current edition.

State of Illinois, Department of Transportation, *Standard Specifications for Road and Bridge Construction*, hereafter termed D.O.T.

International Society of Arboriculture – Tree-Pruning Guidelines

HORTUS THIRD – A Concise Dictionary of Plants Cultivated in the United States and Canada, Cornell University, L.H. Bailey Horitorium, MacMillian Publishing Co., New York, NY.

QUALITY ASSURANCE

All plant material shall conform to the *American Standards for Nursery Stock*, unless noted otherwise herein.

All plant material shall be true to the species and variety/hybrid/cultivar specified, and nursery-grown in accordance with good horticultural practices, and under climatic conditions similar to those of the site location. Specimens nursery-dug to be replanted shall have been freshly dug and properly prepared for planting.

SELECTION OF PLANT MATERIALS

The Contractor shall submit to the Engineer the names and locations of nurseries proposed as sources

of acceptable plant material. The Contractor shall inspect all nursery materials to determine that the materials meet the requirements of this section. Prior to viewing by the Engineer, the Contractor shall pre-tag proposed materials at the nurseries.

If required by the Engineer, the Contractor shall schedule two (2) trips for viewing plant materials at nurseries. The trips to the nurseries shall be efficiently arranged to allow the Engineer or designated representatives to maximize viewing time. The Engineer may choose to attach their seal to each plant, or a representative sample. Viewing and/or sealing of plant materials by the Engineer at the nursery does not preclude the Engineer's right to reject material while on site.

When plant material is sourced from wholesale distribution nurseries, it is the responsibility of the Contractor to make the material available for viewing by the Engineer. The Contractor shall provide alternate nursery options if such material is deemed unacceptable. Photographs are acceptable.

Where requested by the Landscape Architect or Engineer, photographs of plant materials or representative samples of plants shall be submitted. Photographs shall be legible and clearly depict the plant specimen. Each submitted image shall contain a height reference, such as a measuring stick. The approval of plant materials by the Engineer via photograph does not preclude the Engineer's right to reject material while on site.

PLANT MEASUREMENT

Plants shall conform to the measurements specified within the contract documents. Specified height and spread dimensions will refer to the main body of the plant, and not from branch tip to branch tip. Plants meeting a specified measurement, but judged to lack the balance between height and spread characteristic of the species will be rejected.

Plants shall be measured when branches are in their normal position.

Herbaceous perennials shall be measured by pot size, not by top growth.

All other measurements, such as number of canes, ball sizes, and quality designations, shall conform to *American Standards for Nursery Stock.*

REJECTION OF PLANT MATERIALS

Evidence of damage to plant material, which destroys the natural character of the planting, shall be cause for rejection.

When a plant has been rejected by the Engineer, the Contractor shall remove it from the area of the work and replace it with one of the required size and quality. Replacement plant material shall be approved by Engineer, as documented in the "Selection of Plant Material". The Contractor shall bear the total cost of replacing all rejected plant material.

SUBSTITUTIONS

The substitution of plant materials will not be permitted unless authorized in writing by the Engineer. If written proof is submitted by the Contractor that a plant of specified species, variety or size is unavailable, consideration will be given towards the nearest available size or variety, or towards an alternate species selection, with a corresponding adjustment of the contract unit price if applicable.

DELIVERY, STORAGE AND HANDLING

The Contractor shall arrange for the acceptance and unloading of plants at the project site.

All plants are to be labeled by plant name and size. Labels shall be attached securely to all plants, bundles, and containers of plant materials when delivered. Labels shall be durable and legible, with information given in weather-resistant ink or embossed process lettering.

All plant materials, shipments and deliveries shall comply with current state and federal laws and regulations governing the inspection, shipping, selling and handling of plant stock. If required by law or regulation, a certificate of inspection, or a copy thereof, for injurious insects, plant diseases, and other plant pests shall accompany each shipment or delivery of plant material. The certificate shall bear the name(s) and address(es) of the source of the plant stock.

During transport, no plant shall be bound with rope or wire in a manner that damages trunks or breaks branches. Plants shall also not be dragged, lifted or pulled by the trunk, branches or foliage in a damaging way. No plant shall be thrown off of a truck or loader to the ground.

Anti-Desiccant shall be applied to ensure transported trees and shrubs are not affected by damaging winds during transit. Anti-Desiccant may also be applied to ensure the survival of newly planted trees and shrubs through the winter.

Prior to installation, all plants must be protected from sun and drying winds.

Containerized or balled and burlapped plants not being installed immediately must be kept in a shaded area, well-covered with wood chips, soil, or other approved material, and kept well-watered.

The Contractor shall install all plants within three (3) days of delivery.

The Contractor shall cover roots of bare root plants with a moist tarp, burlap, sphagnum moss, or mulch while being transported to, or while being held at the project site. Soak the bare roots overnight in water before planting. Just before planting, extend the roots carefully into a natural position, free of bunching, kinking or circling. Cut back all broken or damaged roots to a point clean and free of rot. No additional root pruning is allowed. Carefully work backfill mix among the roots while simultaneously watering.

Fertilizer shall be delivered to the site in original, sealed containers, and stored in a waterproof space. Containers shall bear the manufacturer's name, manufacturer's address, trademark, number of net pounds, chemical composition/analysis and guarantee. All fertilizers shall be approved by the Engineer or Landscape Architect prior to delivery.

SITE CONDITIONS

The Contractor shall not install plant materials into saturated or frozen soils. The Contractor shall not install plant materials during inclimate weather, such as rain or snow or during windy conditions.

JOB CONDITIONS

The Contractor shall protect all plants, lawns, and grass areas from damage at all times. Damaged plants, lawns or grass areas shall be replaced or treated as required to conform with specifications herein for fresh stock.

Work areas shall be kept clean and orderly during the installation period. Under no condition shall debris from planting activities result in a safety hazard on-site or to adjacent off-site property.

Damage to lawns or grass areas incurred as a result of replacement operations shall be repaired by Contractor at no cost to Owner.

GUARANTEE

Perennial plants shall include a period of establishment and guarantee in accordance with Section 254 of the Standard Specifications and as modified herein.

The Contractor shall guarantee plants for a period of one (1) year after the date of acceptance. When the work is accepted in parts, the guarantee periods shall extend from each of the partial acceptances to the terminal date of the last guarantee period. Thus, all guarantee periods terminate at one time. Plants that are dead or not in a vigorous, thriving condition, as determined by the Engineer (during and at the end of the guarantee period) shall be deemed unacceptable. The Contractor shall replace the unacceptable material at his/her own cost, as soon as weather conditions permit and within the specified planting period.

The Contractor is exempt from replacing plants, after acceptance and during the guarantee period, that are removed by others, lost or damaged due to occupancy of project in any part, lost or damaged by a third party, vandalism, or any natural disaster.

Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this Specification. Make all necessary repairs due to plant replacements. Such repairs shall be done at no extra cost to the Owner.

Replacement plants shall be subject to the same specified requirements of the contract.

The Town of Normal will retain ten percent (10%) of payment during the guarantee period as described herein.

PART 2 - PRODUCTS

PLANT MATERIAL

The Contractor shall provide plants of quantity, size, genus, species, and variety or cultivars as shown and scheduled in contract documents. All plant material shall conform to ANSI Z60.1 "American Standard for Nursery Stock", unless specified otherwise by the Landscape Architect. In no case shall ball size be less than 11 inch in diameter for each inch of caliper.

Plants shall have outstanding form; symmetrical, heavily-branches with an even branch distribution, densely foliated and/or budded, and a strong, straight distinct leader where this is characteristic of the species. Plants shall possess a normal balance for the species between height and spread. The Engineer shall be the final arbiter of acceptability of plant form.

The Contractor shall provide healthy, vigorous stock, grown in a recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae, and defects such as knots, scrapes, broken or split branches, fresh limb cuts, sunscald, injuries, abrasions, or disfigurement. All graft unions shall be completely healed, free of extreme succulence.

CONTAINER GROWN PLANT MATERIAL

Container grown plants shall consist of groundcovers, vines, annuals, perennials

The Contractor shall provide plants that are established and well rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ANSI Z60.1 for the pot size shown or listed.

OTHER MATERIALS

Fertilizer: Fertilizer for planting shall be a complete fertilizer, part of the elements of which from organic sources, and shall contain the following percentages by weight: (5-10-5). Nitrogen 5%, Phosphoric Acid 10%, Potash 5%. It shall be uniform in composition, dry, free-flowing, and shall be delivered to the site in the original unopened containers; all bearing the manufacturer's guaranteed analysis.

Fertilizer for refertilization during maintenance period shall be (20-20-20).

Holly Tone Fertilizer: Fertilizer shall be low nitrogen-grade fertilizer, to be used per the manufacturers recommendation for Broadleaf Evergreens.

Microrhyzome Stimulant: 3-3-3m. Submit specifications for Landscape Architect's approval. Stiumulant shall be watered in at the root zone to promote root growth. Deciduous and evergreen microrhyzome products shall be used according to manufacturer's recommendations.

PART 3 - EXECUTION

SITE EXAMINATION

Perennial plants will be placed in planting beds (installed under previous contract) and in precast concrete planters installed under this contract.

The Contractor shall examine the surface grade for any circumstances that might be detrimental to plant growth, such as deposits of construction-related waste. The Contractor shall examine the grading, verify all elevations, and notify Engineer in writing of any unsatisfactory conditions.

DELIVERY, STORAGE AND HANDLING

Do not prune prior to delivery unless otherwise approved by Landscape Architect or the Town of Normal's Project Representative. Provide protective covering during delivery.

Evidence of improper digging, inadequate protection following digging, carelessness while in transit, evidence of desiccation or wind-related damage, or improper handing or storage, shall be cause of rejection.

Deliver plants after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery, set plants in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.

The duration, method and location of storage of plant materials shall be subject to the approval of the Engineer.

Plant material subject to improper storage procedures shall be rejected as per the Delivery, Storage, and Handling section.

Contractor shall determine if there is sufficient space available to properly stockpile plant material at the time of bidding.

Do not remove container-grown stock from containers until planting time. Plant container-grown stock immediately once removed from container.

PLANTING SEASON

Planting shall only be performed when weather and soil conditions are suitable for planting the materials specified in accordance with locally accepted practice. Install plant materials during the planting time as described below unless otherwise directed by the Engineer. Note exceptions in Part 2 within this section.

Perennials and Groundcover:	May 15 - July 15 and September 1 – October 15
Vines:	May 15 – July 15 and September 1 – October 15

Planting of materials will not be permitted after July 15 unless approved by the Engineer.

COORDINATION WITH PROJECT WORK

The Contractor is responsible for investigating, and being aware of, the work requirements of their sub-consultants and other consultants. The Contractor shall coordinate with all other work that may impact the completion of the work.

Irrigation: Irrigation lines and heads encountered during the excavation process shall be avoided and retain a minimum of damage. When unavoidable, irrigations shall be traced to their nearest connection and removed. The open end of the irrigation line shall be capped to prevent clogging. The site of a disconnected irrigation line shall be flagged after excavated soil has been backfilled.

PREPARATION

The Contractor shall:

- Receive engineer's approval of staking layout prior to excavation.
- Stake all planting areas and notify J.U.L.I.E. at (1-800-892-0123) to verify location of all underground utilities prior to excavation.
- Contractor shall carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.
- Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.
- Remove existing mulch from planting areas as directed by the Engineer. This mulch may be re-spread after planting is complete. Excavate planting areas as shown in the contract drawings.

- Adequately barricade with proper warning devices any planting pit left open when planting work is not in progress, and that poses a hazard to vehicles and/or pedestrians.

- Notify the Engineer in writing of any soil conditions, obstructions, or concerns about water drainage deemed detrimental to healthy plant growth. These conditions or obstructions shall be detailed, along with any suggestions for correction, removal or relocation. Where soil conditions, poor drainage or other obstructions are encountered that cannot be easily remedied, the Engineer will designate alternate locations, and the Contractor shall bear the additional costs of such removals and relocations.

- The planting pit for containerized plants shall be at least 2.5 to 3 times the diameter of the soil ball, or to a dimension otherwise specified.

- Loosen the soil beyond the edge of the planting pit. The soil at the base of the planting pit is to remain undisturbed, the depth of which shall correspond to the distance from the bottom of the soil ball to the root flare, or slightly less.

INSTALLATION OF CONTAINER GROWN PLANTS

All plants in divided containers (flats) shall be planted on-center, as indicated on plans. Contact the Engineer if specified quantity of groundcover or vine does not fill the space per the specified on-center spacing. Make adjustments as directed by the Engineer.

Dig holes large enough to allow for spreading of roots and backfill with topsoil. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover crowns of plants with wet soil.

Allow the finished grades to remain 2"-3" higher than the grades on the grading plan to anticipate settlement over the first year. At the end of the planting guarantee period, reset the grades in this area, if required, to the final grades shown on the grading plan (if applicable).

PROTECTION DURING CONSTRUCTION

The Contractor shall protect landscape work and materials from damage due to landscape operations, operations by other Contractors or trespassers. Maintain protection during installation until acceptance. Treat, repair or replace damaged landscape work immediately.

Damage done to plant materials, or any of the work, by the Contractor, or any of their sub-consultants, shall be replaced by the Contractor at no expense to the Owner.

FINISHING

Remove all twine and rope after planting, along with any labels attached around trunks or branches. During installation, keep pavements clean and work area in an orderly condition.

Keep the site free of garbage at all times. Immediately dispose of wrappings or waste materials associated with products necessary for the completion of the work.

All garbage shall be kept in a central collection container. Do not bury garbage in back-fill.

Once installation is complete, remove any excess soil from pavements or embedded fixtures. Ensure that mulch is confined to planting beds and that all tags and flagging tape are removed from the site.

CLEANING

Soil, branches, binding and wrapping material, rejected plants, or other debris resulting from plant installation shall be promptly cleaned up and removed. New landscape construction in and around the planting areas are to be especially well-cleaned.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

This work shall be measured and paid at the contract unit price per UNIT for PERENNIAL PLANTS, ORNAMENTAL TYPE of the type and size specified. One unit of measure will be equal to 100 plants of the type specified. Measurement and payment for this item will not be performed until the end of the 30 day establishment period for the replacement planting and will include retainage during the one year guarantee period. Only plants that are in place and alive at the time of measurement will be measured for payment.

The price for Perennial Plants shall be considered payment in full for all labor, materials, transportation, handling, installing and any incidental work required to perform this work as specified herein. No additional compensation will be allowed.

END OF SECTION

K1005481 SHREDDED BARK MULCH 3"

DESCRIPTION

Work under this item consists of furnishing, transporting and placing SHREDDED BARK MULCH in planting beds and around trees and in other areas as directed by the Engineer as indicated in the plans, the specifications herein, and by the Engineer.

CONSTRUCTION REQUIREMENTS

Mulch shall not be applied until finished grade has been achieved or repaired as necessary. The Contractor shall remove all litter and plant debris before mulching. Areas designated for drip irrigation shall be mulched only after drip irrigation has been installed.

Care shall be taken not to bury stems, leaves, crowns, vines or the base of tree trunks under mulch material. Mulch shall be applied as follows or as otherwise directed by the Engineer:

- Trees (in turf areas): Three (3) inch depth of shredded hardwood bark mulch.
- Planting Beds: Three (3) inch depth of shredded hardwood bark mulch

Clean-up- All mulch material tracked onto the street shall be removed each day. All sidewalks, curbs, driveways and pavements shall be left in broom cleaned condition.

SUBMITTALS

A sample and "Request for Material Inspection" form must be submitted to the Engineer for approval prior to performing any work.

MATERIALS

Hardwood bark mulch shall be clean, finely shredded, mixed hardwood bark, not to exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. All hardwood bark mulch shall be processed through a hammermill. Hardwood bark not processed through a hammermill will be rejected. Rejected material shall be removed immediately from the work site and disposed of at no additional cost to the Town of Normal.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

This work shall be measured and paid for at the contract unit price per square yard for SHREDDED BARK MULCH 3", which shall include all labor, materials, and equipment, necessary to complete the work as specified herein.

60600505 CONCRETE CURB (SPECIAL)
X0325586 MOW STRIP
XX000300 CONCRETE STEPS
XX001244 RETAINING WALL
XX005022 LANDSCAPING PLANTERS
XX005735 PLANTER CURB
XX008159 PORTLAND CEMENT CONCRETE BAND FOR PAVER BRICKS
RETAINING WALL, SPECIAL
CONCRETE SEATWALL WITH BENCH
MISCELLANEOUS CONCRETE

PART 1 - GENERAL

DESCRIPTION

A This Work shall be performed in accordance with Section 503 of the Standard Specification (IDOT) and as modified herein to include the following

1. Cast-in-place architectural concrete for the plaza including form facings, reinforcement accessories, concrete materials, concrete mixture design, wood seats, hardware, placement procedures, and finishes.

2. Self-consolidating concrete shall be used for the concrete steps, retaining walls, landscaping planters, retaining walls special, and seatwall. Self-consolidating concrete shall be in accordance with IDOT special provision BDE 80152 or as directed by the Engineer.

3. Miscellaneous concrete consists of concrete bases for flag poles, trash receptacles, bicycle racks and bollards.

SUBMITTALS

A Product Data: For each type of product indicated.

B Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mixing water to be withheld for later addition at Project site.

C Formwork Shop Drawings: Show formwork construction including form-facing joints, rustications, construction and contraction joints, form joint-sealant details, form tie locations and patterns, inserts and embedments, cutouts, cleanout panels, release agents and other items that visually affect cast-in-place architectural concrete.

D Placement Schedule: Submit concrete placement schedule before start of placement operations. Include locations of all joints including construction joints (bonded or unbonded) and water seal types and locations.

E Shop Drawings: Include cast in place concrete fabrication and installation requirements. Include plans, elevations, sections, component details, and attachments to other Work. Show layout of the following:

1. Wall bench.
2. Carpentry.
3. Hardware.

F Samples: For each of the following materials:

1. Form-facing panel.
2. Form ties.
3. Form liners.
4. Fine-aggregate gradations.
5. Chamfers and rustications.
6. Lettering fonts.

G Samples for Verification: Prepare samples of same thickness and from same material to be used for the Work in size indicated below:

1. Architectural concrete Samples, cast vertically, approximately 18 by 18 by 2 inches, of finishes, colors, and textures to match design reference sample. Include Sample sets showing the full range of variations expected in these characteristics.
2. Wood Slats: For each species and cut of lumber, with 1/2 of exposed surface finished; 50 sq. in. for lumber.
3. Accessories: 6-inch- long samples of each exposed strip item required.

H Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:

1. Aggregates. Include service record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.

I Material Certificates: For each of the following, signed by manufacturer:

1. Cementitious materials.
2. Admixtures.
3. Form materials and form-release agents.
4. Repair materials.

QUALITY ASSURANCE

A Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B Source Limitations for Cast-in-Place Architectural Concrete: Obtain each color, size, type, and variety of concrete material and concrete mixture from one manufacturer with resources to provide cast-in-place architectural concrete of consistent quality in appearance and physical properties.

C ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specification for Structural Concrete, "Sections 1 through 5 and Section 6, "Architectural Concrete."
2. ACI 303.1, "Specification for Cast-in-Place Architectural Concrete."

D Field Sample Panels: After approval of verification sample and before casting architectural concrete, produce field sample panels to demonstrate the approved range of selections made under sample submittals. Produce a minimum of 3 sets of full-scale panels, cast vertically, approximately 72 by 72 by 6 inches minimum, to demonstrate the expected range of finish, color, and texture variations.

1. Locate panels as indicated or, if not indicated, as directed by Engineer.
2. Demonstrate methods of curing, aggregate exposure, sealers, and coatings, as applicable.
3. In presence of Engineer, damage part of an exposed-face surface for each finish, color, and texture, and demonstrate materials and techniques proposed for repair of tie holes and surface blemishes to match adjacent undamaged surfaces.
4. Maintain field sample panels during construction in an undisturbed condition as a standard for judging the completed Work.
5. Demolish and remove field sample panels when directed.

E Mockups: Before casting architectural concrete, build mockups to verify selections made under sample submittals and to demonstrate typical joints, surface finish, texture, tolerances, and standard of workmanship. Build mockups to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Engineer.
2. Build mockups of typical exterior wall of cast-in-place architectural concrete as shown on Drawings. Include mockups of the following:

a. Smooth formed finish with horizontal reveal.
b. Abrasive blast finish.
c. Rubbed finish.
d. Exposed aggregate finish
e. Lettering.

3. Demonstrate curing, cleaning, and protecting of cast-in-place architectural concrete, finishes, and contraction joints, as applicable.

4. In presence of Engineer, damage part of the exposed-face surface for each finish, color, and texture, and demonstrate materials and techniques proposed for repair of tie holes and surface blemishes to match adjacent undamaged surfaces.

5. Obtain Engineer's approval of mockups before casting architectural concrete.

6. Approved mockups may become part of the completed Work if undisturbed at project completion.

F Preinstallation Conference: Conduct conference at Project site.

1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place architectural concrete to attend, including the following:

a. Contractor's superintendent.
b. Independent testing agency responsible for concrete design mixtures.
c. Ready-mix concrete manufacturer.
d. Cast-in-place architectural concrete subcontractor.

2. Review concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction joints, forms and form-removal limitations, reinforcement accessory installation, concrete repair procedures, and protection of cast-in-place architectural concrete.

G Delivery, Storage, and Handling of seat materials:

1. Lumber: Protect materials against weather and contact with damp or wet surfaces. Stack lumber, flat with spacers between each bundle to provide air circulation. Provide for air circulation within and around stacks and under temporary coverings.

2. Weather Limitations: Proceed with installation of lumber only when existing and forecasted weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.

3. Do not install wood carpentry materials that are wet, moisture damaged, or mold damaged.
4. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
5. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - MATERIALS

FORM-FACING MATERIALS

A Form-Facing Panels for As-Cast and Exposed-Aggregate Finishes: Steel, glass-fiber-reinforced plastic, or other approved nonabsorptive panel materials that will provide continuous, true, and smooth architectural concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

B Form Liners: Units of face design, texture, arrangement, and configuration indicated on drawings. Furnish with manufacturer's recommended liquid-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent surface treatments of concrete.

C Chamfer Strips: Metal, rigid plastic, elastomeric rubber, or dressed wood, 3/4 by 3/4 inch, minimum; nonstaining; in longest practicable lengths.

D Form Joint Tape: Compressible foam tape; pressure sensitive; AAMA 800, "Specification 810.1, Expanded Cellular Glazing Tape"; minimum 1/4 inch thick.

E Form Joint Sealant: Elastomeric sealant complying with ASTM C 920, Type M or S, Grade NS, that adheres to form joint substrates.

F Sealer: Penetrating, clear, polyurethane wood form sealer formulated to reduce absorption of bleed water and prevent migration of set-retarding chemicals from wood.

G Form-Release Agent: Commercially formulated colorless form-release agent that will not bond with, stain, or adversely affect architectural concrete surfaces and will not impair subsequent treatments of those surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

H Surface Retarder: Chemical liquid set retarder, for application on form-facing materials, capable of temporarily delaying final hardening of newly placed concrete surface to depth of reveal specified.

I Form Ties: Factory-fabricated, ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

STEEL REINFORCEMENT AND ACCESSORIES

A Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire fabric in place; manufacture according to CRSI's "Manual of Standard Practice."

1. Where legs of wire bar supports contact forms, use [gray, all-plastic] [CRSI Class 1, gray, plastic-protected] [or] [CRSI Class 2, stainless-steel] bar supports.

B Epoxy-Coated Reinforcing Bars: [ASTM A 615/A 615M, Grade 60 (Grade 420)] [ASTM A 706/A 706M], deformed bars, [ASTM A 775/A 775M] [or] [ASTM A 934/A 934M], epoxy coated, with less than 2 percent damaged coating in each 12-inch bar length.

C Epoxy-Coated Wire: ASTM A 884/A 884M, Class A, Type 1 coated, [as-drawn, plain] [deformed]-steel wire, with less than 2 percent damaged coating in each 12-inch wire length

CONCRETE MATERIALS

A Shall be performed in accordance with Section 503 of the Standard Specification

ADMIXTURES

A Color Pigment: ASTM C 979, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, free of carbon black, nonfading, and resistant to lime and other alkalis.

B Provide one of the following:

1. All exposed concrete elements inside the circle, and as directed by Engineer:
2. Color "A": 238 Thyme, as manufactured by S.G.S. Solomon colors.

or

3. Color 'B': C-20 Limestone, as manufactured by L.M. Scofield Company.

CURING MATERIALS

A Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

B Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

1. For integrally colored concrete, curing compound shall be approved by color pigment manufacturer.
2. For concrete indicated to be sealed, curing compound shall be compatible

with sealer.

REPAIR MATERIALS

A Bonding Agent: ASTM C 1059, Type II, nonredispersible, acrylic emulsion or styrene butadiene.

B Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements.

1. Types [I and II, non-load bearing] [IV and V, load bearing], for bonding hardened or freshly mixed concrete to hardened concrete.

CONCRETE MIXTURES, GENERAL

A Shall be in accordance with Section 503 of the Standard Specifications.

B Prepare design mixtures for each type and strength of cast-in-place architectural concrete proportioned on basis of laboratory trial mixture or field test data, or both, according to ACI 301.

1. Use a qualified independent testing agency for preparing and reporting proposed design mixtures based on laboratory trial mixtures.

C Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

D Admixtures: Use admixtures according to manufacturer's written instructions.

E Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.

CONCRETE MIXING

A Ready-Mixed Architectural Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and furnish batch ticket information.

1. Clean equipment used to mix and deliver cast-in-place architectural concrete to prevent contamination from other concrete.
2. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

STEEL CONNECTION MATERIALS FOR SEATS

A Carbon-Steel Shapes and Plates: ASTM A 36/A 36M.

B Carbon-Steel Headed Studs: ASTM A 108, AISI 1018 through AISI 1020, cold finished; AWS D1.1, Type A or B, with arc shields.

C Carbon-Steel Plate: ASTM A 283/A 283M.

D Carbon-Steel Bolts and Studs: ASTM A 307, Grade A; carbon-steel, hex-head bolts and studs; carbon-steel nuts; and flat, unhardened steel washers.

E Stainless-Steel Bolts and Studs for Connecting Wood Slats: ASTM F 593, Alloy 304 or 316, hex-head bolts and studs; stainless-steel nuts; and flat, stainless-steel washers.

1. Lubricate threaded parts of stainless-steel bolts with an antiseize thread lubricant during assembly.

F Shop-Primed Finish: Prepare surfaces of nongalvanized steel items, except those surfaces to be embedded in concrete, according to requirements in SSPC-SP 3 and shop-apply lead- and chromate-free, rust-inhibitive primer, complying with performance requirements in FS TT-P-664 according to SSPC-PA 1.

G Welding Electrodes: Comply with AWS standards.

H Accessories: Provide clips, hangers, plastic shims, and other accessories required to install cast in place architectural concrete units.

SEAT EXTERIOR WOOD SLATS

A Lumber for Semitransparent-Stained Finish:

1. Species and Grade: Ipe to match Engineer's sample.
2. Maximum Moisture Content: 19 percent.
3. Finger Jointing: Not allowed.
4. Face Surface: Surfaced (smooth).

SEAT FABRICATION

A Anchors, Inserts, Plates, Angles, Epoxy and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position for attachment of loose hardware, and secure in place after casting operations. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.

B Furnish loose steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers, and other hardware shapes for securing cast in place architectural concrete units to supporting and adjacent construction.

PART 3 - CONSTRUCTION REQUIREMENTS

FORMWORK

A Limit deflection of form-facing panels to not exceed ACI 303.1 requirements.

B In addition to ACI 303.1 limits on form-facing panel deflection, limit cast-in-place architectural concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:

1. Class A, 1/8 inch.

C Fabricate forms to result in cast-in-place architectural concrete that complies with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

D Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-in-place surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood rustications, keyways, reglets, recesses, and the like, for easy removal.

1. Seal form joints and penetrations at form ties with form joint tape or form joint sealant to prevent cement paste leakage.
2. Do not use rust-stained steel form-facing material.

E Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

F Chamfer exterior corners and edges of cast-in-place architectural concrete.

G Coat contact surfaces of wood rustications and chamfer strips with sealer before placing reinforcement, anchoring devices, and embedded items.

H Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

I Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

J Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

K Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

L Coat contact surfaces of forms with surface retarder, according to manufacturer's written

instructions, before placing reinforcement.

M Construct forms with reveal 6 inches from top of wall and in locations as directed by Engineer. Verify reveal dimensions with Engineer.

N Place form liners accurately to provide finished surface texture indicated. Provide solid backing and attach securely to prevent deflection and maintain stability of liners during concreting. Prevent form liners from sagging and stretching in hot weather. Seal joints of form liners and form liner accessories to prevent mortar leaks. Coat form liner with form-release agent.

REINFORCEMENT AND INSERTS

A Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

REMOVING AND REUSING FORMS

A Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.

1. Schedule form removal to maintain surface appearance that matches approved mockups.
2. Cut off and grind glass-fiber-reinforced plastic form ties flush with surface of concrete.

B Leave formwork for beam soffits, joists, slabs, and other structural elements that support weight of concrete in place until concrete has achieved 28-day design compressive strength. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

C Clean and repair surfaces of forms to be reused in the Work. Do not use split, frayed, delaminated, or otherwise damaged form-facing material. Apply new form-release agent.

D When forms are reused, clean surfaces, remove fins and laitance, recoat with release agents and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for cast-in-place architectural concrete surfaces.

JOINTS

A Construction Joints: Install construction joints true to line with faces perpendicular to surface plane of cast-in-place architectural concrete so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated.

2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete. Align construction joint within rustications attached to form-facing material.
3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
5. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
6. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

B Contraction Joints: Form weakened-plane contraction joints true to line with faces perpendicular to surface plane of cast-in-place architectural concrete so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.

CONCRETE PLACEMENT

A Comply with Section 503 of the Standard Specification (IDOT) for concrete placement.

FINISHES, GENERAL

A Architectural Concrete Finish: Match Engineer's design reference sample, identified and described as indicated, to satisfaction of Engineer.

B Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces.

1. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

C Maintain uniformity of special finishes over construction joints, unless otherwise indicated.

AS-CAST FORMED FINISHES

A Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Remove fins and other projections exceeding specified limits on formed-surface irregularities. Repair and patch tie holes and defects.

B Form-Liner Finish: Produce a textured surface free of pockets, streaks, and honeycombs, and of uniform appearance, color, and texture.

C Rubbed Finish: Apply the following to smooth-form-finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process
2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match surrounding concrete. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix one part portland cement and one part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match surrounding concrete. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.

CONCRETE PROTECTING AND CURING

A General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.

B Begin curing cast-in-place architectural concrete immediately after removing forms from or applying as-cast formed finishes to concrete. Cure according to ACI 308.1, by one or a combination of the following methods that will not mottle, discolor, or stain concrete:

1. Moisture Curing: Keep exposed surfaces of cast-in-place architectural concrete continuously moist for not less than seven days with the following materials:
   a. Water.
   b. Continuous water-fog spray.
   c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches , and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period; use cover material and waterproof tape.
3. Curing Compound: Mist concrete surfaces with water. Apply curing

compound uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

REPAIRS, PROTECTION, AND CLEANING

A Repair and cure damaged finished surfaces of cast-in-place architectural concrete when approved by Engineer. Match repairs to color, texture, and uniformity of surrounding surfaces and to repairs on approved mockups.

1. Remove and replace cast-in-place architectural concrete that cannot be repaired and cured to Engineer's approval.

B Protect corners, edges, and surfaces of cast-in-place architectural concrete from damage; use guards and barricades.

C Protect cast-in-place architectural concrete from staining, laitance, and contamination during remainder of construction period.

D Clean cast-in-place architectural concrete surfaces after finish treatment to remove stains, markings, dust, and debris.

E Wash and rinse surfaces according to concrete finish applicator's written recommendations. Protect other Work from staining or damage due to cleaning operations.

1. Do not use cleaning materials or processes that could change the appearance of cast-in-place architectural concrete finishes.

SIGN LETTERING

A Sign letters shall be sandblasted into the concrete wall as detailed on the plans and as directed by the Engineer. Letters shall be 9 inches in height with a depth of 1/4inch. A mockup of the lettering shall be provided and approved by the Engineer prior to beginning the work.

SEAT EXAMINATION

A Examine substrates and areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions, including levelness tolerances, have been corrected.

SEAT WOOD SLAT INSTALLATION, GENERAL

A Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.

B Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

1. Scribe and cut exterior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
2. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
3. Coordinate exterior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry.

C Install flat grain lumber with bark side exposed to weather.

D Install lumber with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long except where necessary.

1. Use scarf joints for end-to-end joints.
2. Stagger end joints in adjacent and related members.

SEAT REPAIRS

A Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.

1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

SEAT CLEANING AND PROTECTING

A Provide final protection and maintain conditions, in a manner acceptable to Installer, that ensure wood and hardware is without damage or deterioration at time of Substantial Completion.

EXTRA MATERIALS

A Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Bench Replacement Slats: No fewer than two full-size units for each size indicated.

PART 4 - MEASUREMENT AND PAYMENT

Cast-in-place architectural concrete items will be measure and paid for on the following basis:

Per foot for CONCRETE CURB (SPECIAL) for the top longitudinal surface of lawn edge curbs measured along the centerline of the edge curbs, which price includes all excavation, aggregate base, formwork, concrete materials, accessories, reinforcement bars, dowel bars, and joints. The price shall include the varying widths and thicknesses of the concrete curbs.

Per square yard for MOW STRIP for the top horizontal surface of mow strips, which price includes all excavation, aggregate base, formwork, concrete materials, reinforcement bars, and joints.

Per square foot for CONCRETE STEPS for the top horizontal surface area of step treads, which price includes all excavation, aggregate base, formwork, concrete materials, accessories, concrete foundations, epoxy coated reinforcement bars, non slip abrasive bars, and doweled expansion joints.

Per foot for RETAINING WALL for the top longitudinal surface of retaining walls measured along the centerline of the wall, which price includes all excavation, filter fabric, aggregate base, formwork, concrete materials, accessories, concrete foundations, reinforcement bars, waterproofing, and joints. The price shall include the varying height of the walls.

Per lump sum for LANDSCAPING PLANTERS, which price includes all excavation, filter fabric, aggregate backfill, formwork, concrete materials, concrete foundations, frames and accessories, reinforcement bars, waterproofing, pipe weeps, and joints.

Per foot for PLANTER CURB for the top longitudinal surface of curbs measured along the centerline of the curb, which price includes all excavation, aggregate base and backfill, formwork, concrete materials, accessories, reinforcement bars, and joints.

Per foot for PORTLAND CEMENT CONCRETE BAND FOR PAVER BRICKS for the top longitudinal surface of bands measured along the centerline of the band, which price includes all excavation, aggregate base, formwork, concrete materials, accessories, dowel bars, and joints. The price shall include the varying widths and thicknesses of the concrete bands.

Per foot for RETAINING WALL, SPECIAL for the top longitudinal surface of sign retaining walls measured along the centerline of the wall, which price includes all excavation, filter fabric, aggregate base, formwork, concrete materials, accessories, concrete foundations, reinforcement bars, waterproofing, joints, and lettering. The price shall include the varying height of the walls.

Per lump sum for CONCRETE SEATWALL WITH BENCH, which price includes all excavation, filter fabric, aggregate backfill, formwork, concrete materials, concrete foundations, cast-in-place bench modules, frames and accessories, reinforcement bars, waterproofing, pipe weeps, joints, wood seats, frames, hardware.

Miscellaneous Concrete for bases for flag poles, trash receptacles, bicycle racks and bollards will not be measured and paid for separately, but will be included in the cost of each of these pay items as specified herein.

END OF SECTION

XX003885 IRRIGATION SYSTEM

PART 1 - DESCRIPTION OF WORK

GENERAL

A The extent of base landscape irrigation is shown on the drawing. Unless otherwise specified, the plans and specifications are intended to include everything obviously requisite and necessary for the proper installation and completion of the work, whether or not each necessary item is mentioned herein. The plans and specifications are intended to be cooperative, any time called for in one, and not the other shall be as binding as if called for in both.

B Scope of work shall include: Furnish and install pump, autofill, controls and electrical. Cistern and wet well will be by others under a separate contract, coordinate all work with contractor. Any access hatches into paving area to be coordinated with vault installation contractor.

QUALITY ASSURANCE

A Manufacturing Qualifications:

1. Provide the landscape irrigation system as a complete unit produced by the manufacturers specified for all portions of the work including heads, valves, piping circuits, controller, pump and accessories. Materials shall be purchased from the nearest authorized distributor to the project of the specified products.

B Installer Qualifications.

1. Acceptable installers must have previous experience with the installation of subsurface drip irrigation. Additionally, contractors with the Irrigation Association Certification CIC (Certified Irrigation Contractor) will be required. All other requirements, should refer back to General Specifications.

C Testing.

1. Pressure testing/verification shall be the responsibility of the irrigation contractor.

D Requirements of Regulatory Agencies.

1. System shall comply with the requirements of state and local codes and ordinances.

2. Electrical devices shall carry Underwriters' Laboratory labels.

REFERENCES

A ASTM D2241 - Polyvinyl chloride plastic pipe.

B ASTM D2564 - Solvent cement for polyvinyl chloride plastic pipe and fittings.

SUBMITTALS

A As-Builts.

1. Submit as-built drawings after Substantial Completion.
2. As-Built drawings shall be on reproducible vellum, same size as the original drawings.

B Manufacturer's Data.

1. Submit two copies of manufacturer's specifications and instructions for any materials and products to be substituted for those specified, no later than 10 business days prior to original bid date.

GUARANTEE

A The Contractor shall furnish a written warranty to the effect that all materials and work furnished under this section is warranted for at least one year, shall be free from defects and faulty workmanship and that any defective material or work shall be promptly repaired or replaced without additional cost to the Owner.

PROJECT/SITE CONDITIONS

A Protection.

1. Protect structures, streets, curbs, sidewalks, fences, walls, trees and other existing features from damage.

SEQUENCING/SCHEDULING

A Irrigation systems shall be installed and made operable in conjunction with all plant materials being installed. In all affected areas, the ground should be restored to its original grade as existed just before installation began. Coordinate irrigation system installation with wet well installation.

OPERATION AND MAINTENANCE

A Provide instructions covering full operation, care and maintenance of system and controls. Also provide manufacturers' parts catalogs.

PART 2 - PRODUCTS

MATERIALS

A Backflow Preventers.

1. This project contains no backflow prevention devices, as water is being utilized from underground cisterns.

2. Automatic Controllers.
   a. High efficiency controllers are preferred on this project. All must have pump start capability. These would include:
   1.) Toro Intelllisense
   2.) Weathermatic Smartline
   3.) Rainbird ESP-SMT

3. Autofill and Level Controller

CONTROLLER - VALVE COMMUNICATIONS.

A Communication between controller and the valves shall be accomplished by #18 gauge multi strand station wire.

VALVES/CONTROLS

A Quick coupling valves.

1. Toro #474-00
2. Rainbird #5RC
3. Supply appropriate matching key and hose ell.
4. All quick coupling valves shall be connected to the mainline by Lasco 1" triple-elbow swing joints and placed in valve boxes.
5. Automatic valves: The automatic control valves shall be plastic valves operated by low-power solenoid, normally closed, manual flow adjustment, as indicated on plans.
6. 1" Valves
   a. Toro #254-06-04
   b. Irritrol #2500TF
   c. Rainbird #100-PGA
7. Valve Enclosures.
   a. Control valves and quick-coupling valves shall be enclosed in a fiberglass valve box such as Carson, Ametek, or approved equal. Valve boxes are to be filled with a minimum of 6" of washed gravel

below pipe level to insure adequate drainage.

B Sprinkler Heads

1. Spray Head Bodies
   a. Rainbird 1800 Series
   b. Tor 570Z Series

C Specialty Nozzles

1. MP Rotator nozzles, as shown on plan to be installed on spray head bodies described above.
2. Pressure Compensating Full-Circle .25 gpm Flood Bubbler Nozzles
   a. Toro #FB-25-PC
3. Rainbird #1401

D Submersible Pump

1. The submersible pump and control package that will be installed in the wet well will be a Flint and Walling Commander Pro 75 series, model #CP75-1907. The package includes a Franklin Electric CP subdrive, Small Air-E-Tainer pressure tank, and pressure switch. The system is designed to provide up to 19 gallons per minute at 60psi. A Warrick liquid level probe system #19MRAO and 3 liguid level control probes #W3W2 will be installed in the wet well to prevent pump burnout from lack of water. Probes will be suspended with a liguid level probe cable #W3Z1.

E Wet Well

1. The wet well and cistern installation shall be installed by others. Contractor shall coordinate all irrigation work with work by others. The cistern is a corrugated steel piping and manifold system, manufactured by Contech.

F Pipe.

1. Main line piping shall be Class 200 polyvinyl chloride (PVC) solvent-weld pipe as manufactured by Eagle or Cantex, or other approved equal. Pipe shall carry the N.S.F. seal of approval and meet the following specifications: ASTM D-2241, SDR 21 or latest revisions. Header and Footer pipe for each drip zone shall be 1-1/2" Class 160 (or 200) PVC, SDR 26, solvent-weld pipe.
2. Drip line pipe will be Netafim model #TLCV26-18XX. No other dripline tubing will be accepted.

G Sleeves.

1. Sleeves shall be twice the nominal size of the pipe to be carried within, unless noted differently. Sleeves for control wire only shall be 2" diameter,

placed alongside (or above) each sleeve for the mainline.

2. Under walks, paving and where indicated on drawings, install Schedule 40 PVC (ASTM D-1785). Tape ends of sleeves and mark sleeve locations with above grade stakes with appropriate annotation, i.e.. "irrigation sleeves". Stakes shall be protected. Do not backfill over sleeve locations behind back of curbs or along walk edges, until work has been completed.
3. Sleeves noted on the plan shall be furnished and installed by contractor or irrigation subcontractor.

H Pipe Fittings.

1. PVC fittings shall be solvent weld Schedule 40 standard weight. Attachment shall be made with both a primer and a solvent cement as approved by the manufacturer.

I Manufacturer/Supplier.

1. Some materials chosen for the design of the sprinkler system have been specifically referred to by manufacturer, enabling the Owner to establish the level of quality and performance required by the system design. After award of contract and prior to beginning work, the contractor shall submit for approval three copies of the complete list of materials to be installed.
2. Acceptable manufacturers of sprinkler heads, control valves and controllers:
   a. The Toro Company (Riverside, California)
   b. Telsco/Weathermatic (Dallas, Texas)
   c. Irritrol (Riverside, California)
   d. Rainbird (Glendora, California)

PART 3 - EXECUTION

WATER SUPPLY

A Supply shall be from a stormwater capture cistern (by others) that will be the primary water supply for the irrigation system. The location is shown on the plan. Water will be pumped from the adjoining wet well (by others) that connects to the detention tank. The wet well bottom will be at least two feet below the bottom of the tank, and will house the submersible pump. The pump will be controlled from the irrigation controller and the VFD panel that will be placed next to or near the controller. There will also be a pressure tank and switch to allow for the use of water with a quick coupling device. The installation and wiring of the controller, pump, pump start relay panel and the routing of the communication wire to the irrigation system will be the responsibility of the contractor. Proper connection points for power to the aforementioned units will be coordinated with electrical work within this

contract.

SYSTEM DESIGN

A Lay out work as closely as possible to the drawings. The drawings, though carefully drawn, are generally diagrammatic to the extent that all offsets and fittings are not necessarily shown as they will exist on site.

B The Contractor shall be responsible for full and complete coverage of irrigated areas as to spacing and precipitation rates being matched and shall make any necessary adjustments to the system at no additional charge to the Owner. Head spacing as shown on the drawings is predicated on the water pressure being 35 p.s.i. (static) at the valve.

TRENCHING, BACKFILLING AND COMPACTING

A Pulling, Excavating and Trenching.

B Trenching, backfilling and compacting shall be as per Sitework Specifications - Trenching and Backfilling for utilities.

C If trenching, trenches shall be made wide enough to allow a minimum of 6 inches between parallel pipe lines. If pulling, the same lateral distance shall be observed.

D Minimum Cover.

1. An absolute minimum of 12 inches cover shall be held over mainline and control wires. Mains shall be 18" (16" minimum) below finished grade.

E Backfill.

1. Backfilling and backfill material shall be as per Sitework Specifications. Backfilling shall be done in 6" layers and compacted after each layer, to prevent excessive settling. Where pipe is pulled into the ground, slit-domes shall be compacted to original grade after pulling.

PAVEMENTS, WALKS, ETC.

A Communication wire must be placed in sleeving under pavement, walks, etc.

B Sleeves noted on the plan shall be furnished and installed by contractor or irrigation subcontractor.

PART 4 - INSTALLATION

GENERAL.

A Unless otherwise indicated, comply with requirements of the Local Plumbing Code.

B Install piping, valves, controls and sprinklers in accordance with manufacturer's written instructions. Include autofill and level control switch.

AUTOMATIC CONTROLLER.

A Connect remote control valves to controllers in a sequence corresponding with station settings, as denoted on the plan.

COMMUNICATIONS CIRCUITRY

A Communication circuitry shall be run, wherever possible, along with the mainline pipe.

B A minimum of 12 inches of wire shall be left at each valve to provide slack.

PIPING.

A Pipe may be assembled and welded on the surface.

B Plastic pipe and fittings shall be solvent welded using solvents and methods as recommended by manufacturer of the pipe, except where screwed connections are required. Pipe and fittings shall be thoroughly cleaned of dirt, dust and moisture before applying solvent with a non-synthetic bristle brush.

C When pipe is pulled into the ground, all PVC pipe shall be solvent welded at least 2 hours before pulling.

D Make all connections between plastic pipe and metal valves or steel pipe with threaded fittings using plastic male adapters.

E Use dielectric fittings at connection where pipes of dissimilar metal are joined.

F Lay pipe on solid subbase, uniformly sloped without humps or depressions.

G Trenches (or pulls) shall be snaked, or the pipe snaked, within the trench to allow for expansion and contraction of pipe.

WET WELL

A By others.

CLOSING OF PIPES AND FLUSHING LINES.

A Cap or plug openings as soon as lines have been installed to prevent the entrance of materials that would obstruct the pipe. Leave in place until removal is necessary for completion of the installation. Thoroughly flush out water lines and before installing heads, valves, and other hydrants.

B Test in accordance with industry standards and pipe ratings.

C Upon completion of the testing, the Contractor shall complete assembly and adjust sprinkler heads for proper distribution.

TESTING

A Operational Testing.

B Perform operational testing after backfill is completed and tubing is in place.

C Demonstrate to the Owner that system meets coverage requirements and that automatic controls function properly.

D Coverage requirements are based on operation of one circuit at a time, unless noted differently.

TRAINING

A Personnel Training.

B Contractor shall be responsible for the training of as many personnel as the Owner shall deem necessary.

C Contractor shall be responsible for one closing and one opening of the system during the appropriate times of the year as part of the training of the Owner's personnel.

D Contractor training shall include general trouble-shooting and operation of the system with reference to head, valve, and controller operation.

SPARE PARTS

A Submit spare parts as pertains to warranted materials, described by manufacturers' warranties.

1. Provide:
   a. One extra control valve
   b. One key for quick coupling valve.
   c. Owners/operational manuals available on controller, valves, heads, and pump control package.

CLEAN UP

A Remove debris, resulting from work of this Section, from the site.

ADJUSTMENT

A After completion of grading, seeding or sodding, if applicable, contractor shall return to the jobsite to perform any final adjustments to the system which might be deemed necessary.

B Maintenance shall include, in addition to initial start-up, one winterization and one Spring start-up the following year. Re-set heads twice, as directed, if necessary.

PART 5 - BASIS OF PAYMENT

A Backflow preventers, automatic controllers, controller–valve communicators, valves, controls, valve enclosures, sprinkler heads, submersible pump, wet well, irrigation pipe and sleeves (irrigation system) will be paid at the contract unit price per lump sum, which price will be payment in full for all labor, material, equipment and services necessary for furnishing and installing the IRRIGATION SYSTEM.

END OF SECTION

XX006188 REMOVE AND RE-ERECT SEGMENTAL BLOCK RETAINING WALL

Description

This work shall consist of the removal, storage and re-erection of the existing concrete block wall at the locations shown on the plans and as directed by the Engineer. The existing concrete blocks shall be removed and stored on site so as to prevent damage to the materials. Any excess concrete block material shall remain on site and become property of the Town of Normal. The concrete blocks and base shall be re-erected using the same type of materials and methods as used for the existing installation and shall meet the approval of the Engineer. The existing concrete block materials that are damaged or are not useable, shall be replaced by the Contractor at his/her expense.

Construction Requirements

The Contractor shall be responsible for investigating the existing wall to determine the type and size of any existing concrete or aggregate base material. The same type and size of base shall be constructed under the re-erected concrete blocks. The base and modular blocks shall be placed level and aligned to provide straight lines and smooth curves with each course of blocks offset by one half of a block width. If necessary construction adhesive shall be applied between the blocks as directed by the Engineer. Topsoil shall be placed to backfill along the wall as directed by the Engineer.

Measurement and Payment

This work will be measured and paid for at the contract unit price per square foot for REMOVE AND RE-ERECT SEGMENTAL BLOCK RETAINING WALL, which price shall include labor, equipment and materials required including the excavation, concrete or aggregate base and backfill. The wall shall be measured along the vertical front face of the blocks from the top of the cap to the bottom of the bottom course of blocks.

XX006570 TREES (SPECIAL)

PART 1 GENERAL

DESCRIPTION OF WORK
These specifications, along with contract drawings and lists of plant materials, apply to those items necessary for and incidental to the preparation, execution, completion and maintenance of the landscape planting activities (excluding lawn areas) specified in the contract. The scope includes the furnishing and planting of trees, shrubs, ground covers, perennials, annuals, and bulbs, and the maintenance activities of fertilizing, pruning and watering.

RELATED SPECIFICATION SECTIONS
Harwood Mulch
Soil Preparation
Salt tolerant Sod
Irrigation
Crushed Stone

REFERENCES
American Standards for Nursery Stock, ANSI Z60.1, current edition. American Association of Nurserymen, Inc.

Standardized Plant Names, Second Edition (1942). American Joint Committee on Horticulture Nomenclature, Horace McFarland Company, Harrisburg, PA.

American National Standard for Tree Care Operations - Tree, Shrub and Other Woody Plant

Maintenance-Standard Practices, ANSI A300, current edition.

State of Illinois, Department of Transportation, *Standard Specifications for Road and Bridge Construction*, hereafter termed D.O.T.
International Society of Arboriculture – Tree-Pruning Guidelines

HORTUS THIRD – A Concise Dictionary of Plants Cultivated in the United States and Canada, Cornell University, L.H. Bailey Horitorium, MacMillian Publishing Co., New York, NY.

QUALITY ASSURANCE
All plant material shall conform to the *American Standards for Nursery Stock*, unless noted otherwise herein.

All plant material shall be true to the species and variety/hybrid/cultivar specified, and nursery-grown in accordance with good horticultural practices, and under climatic conditions similar to those of the site location. Specimens nursery-dug to be replanted shall have been freshly dug and properly

prepared for planting.

Trees and shrubs:

Shall be trained in development and appearance as to be superior in form, compactness and symmetry. Trees with multiple leaders, unless specified otherwise, and shrubs with damaged or cut mainstem(s), will be rejected.

With a damaged, cut or crooked leader, abrasion of bark, sunscald, frost crack, disfiguring knots, insects (including eggs and larvae) or insect damage, cankers/cankerous lesions or fungal mats, mold, prematurely-opened buds, or cuts of limbs over 3/4" diameter that are not completely callused will be rejected.

Shall have healthy, well-developed root systems, and be free from physical damage or other hindrances to healthy growth.

Balled and burlapped plants shall be dug with solid balls of a diameter not less than that recommended by the *American Standards for Nursery Stock*, and of sufficient depth to include both fibrous and feeding roots. Balls shall be securely wrapped with burlap, and tightly bound with rope or twine. No plant shall be bound with rope or wire in such manner as to damage bark or break branches. The root flare should be within the top 2" of the soil ball. Balled and burlapped plants will not be accepted if the ball is dry, cracked, or broken before or during planting.

Containerized plants are to be well-established within the container, with a root system sufficiently developed to retain its shape and hold together when removed from the container. Soil within the container should be held together by the roots, in form and whole. Plants shall not be pot-bound, nor have kinked, circling, or bent roots.

Bare root plants are to have a healthy, well-branched, and adequately-spreading root system characteristic of the species.

Herbaceous perennials, annuals and bulbs shall only be supplied from nurseries certified by state plant inspectors. Substitutes or collected material may be used if approved by Owner's Project Representative or Landscape Architect.

Large Caliper Tree: The term "Large Caliper Tree" shall be defined as any specified tree or approved substitute tree greater than four inch (4") caliper in size.

SELECTION OF PLANT MATERIALS
Submit to the Landscape Architect the names and locations of nurseries proposed as sources of acceptable plant material. Inspect all nursery materials to determine that the materials meet the requirements of this section. Prior to viewing by the Landscape Architect, the Landscape Contractor shall pre-tag proposed materials at the nurseries.

Schedule with the Landscape Architect two (2) trips for viewing plant materials at nurseries. The trip to the nurseries shall be efficiently arranged to allow Landscape Architect to maximize viewing time. A minimum of six weeks shall be allowed for this viewing prior to the time that plants are to be dug.

The Landscape Architect may choose to attach their seal to each plant, or a representative sample. Viewing and/or sealing of plant materials by the Landscape Architect at the nursery does not preclude the Owner's Project Representative's right to reject material while on site.

When plant material is sourced from wholesale distribution nurseries, it is the responsibility of the Landscape Contractor to make the material available for viewing by the Landscape Architect. The Landscape Contractor shall provide alternate nursery options if such material is deemed unacceptable. Photographs are an acceptable.

Where requested by the Landscape Architect, photographs of plant materials or representative samples of plants shall be submitted. Photographs shall be legible and clearly depict the plant specimen. Each submitted image shall contain a height reference, such as a measuring stick. The approval of plant materials by the Landscape Architect via photograph does not preclude the Owner's Project Representative's right to reject material while on site.

The Contractor is responsible for paying any upcharge for the Landscape Architect to attach his/her seal to specific plant material.

Large-Caliper Trees: All large-caliper trees shall root-pruned one growing season in advance of being dug. The contractor shall be responsible for coordinating terms with the nursery. The Owner may require that the Large-Caliper trees be dug in stages or may require other methods to ensure the survival of the tree.

MEASUREMENT

Plants shall conform to the measurements specified within the contract documents. Specified height and spread dimensions will refer to the main body of the plant, and not from branch tip to branch tip. Plants meeting a specified measurement, but judged to lack the balance between height and spread characteristic of the species will be rejected.

Plants shall be measured when branches are in their normal position.

No plant shall be less than the minimum size specified, and no less than fifty (50) percent of the plants shall be as large as the maximum size specified.

Caliper measurements shall be taken at 6" above ground level for trees less than 4" in caliper and at 12" for trees larger than 4" caliper.

Containerized shrubs shall be measured by height and width for conformity with the plant list.

Herbaceous perennials shall be measured by pot size, not by top growth.

All other measurements, such as number of canes, ball sizes, and quality designations, shall conform to *American Standards for Nursery Stock.*

INSPECTIONS
Plant materials shall be subject to pre-delivery inspection and approval by the Landscape Architect or Project Representative at a nursery or some other site where they are growing, this to judge conformity with specified requirements. Upon securing all plant materials, the Contractor shall submit to Owner a written request for inspection at least five (5) working days prior to the proposed date. After approval by the Landscape Architect or Owner's Project Representative, the plant is to be tagged for delivery.

Tagged plants are to be inspected on delivery to the project site, and the Landscape Architect or Project Representative may reject any specimens no longer meeting the specified standards or that have been damaged in transit.

REJECTION OF PLANT MATERIALS
Evidence of damage to plant material, which destroys the natural character of the planting, shall be cause for rejection.

When a plant has been rejected by the Owner's Project Representative, remove it from the area of the work and replace it with one of the required size and quality. Replacement plant material shall be approved by Landscape Architect and Owner's Project Representative, as documented in the Selection of Plant Material. The Contractor shall bear the total cost of replacing rejected plant material.

Any plant that has the following characteristics shall be cause for rejection:

Any tree that has a canopy with 50% or more dead limbs.

Any tree that has dead limbs that, when removed, will result in the loss of 30% or more of the structure and form of the canopy of the tree.

Any tree that is of a species that characteristically has a dominant central leader, and if the leader is dead, when removed the tree will not have a form consistent with the species.

Any tree that has open wounds (not completely healed over) that penetrates the bark to the wood on trunks or major limbs the removal of which would result in the loss of 30% or more of the structure and form of the tree.

A representative of the Contractor shall be present at all inspections by the Landscape Architect or

Owner's Project Representative.

SUBSTITUTIONS
The substitution of plant materials is not permitted unless authorized in writing by Owner. If written proof is submitted by the Contractor that a plant of specified species, variety or size is unavailable, consideration will be given towards the nearest available size or variety, or towards an alternate species selection, with a corresponding adjustment of the contract price.

UNAVAILABILITY OF PLANT MATERIALS
Before changes or substitutions can be made due to unavailability of plant material, the Landscape Contractor shall submit satisfactory evidence that he or she has advertised for a one-month period in a trade journal such as the "Landscape Materials Information Service", with no response, or has undertaken another method of locating plant material acceptable to the Landscape Architect.

In the event that the Landscape Contractor cannot find the specified plant material, the Landscape Architect may require that the Landscape Contractor find the plant material using a plant broker.

The contractor shall be held solely and completely liable for any failure resulting from the use of plant materials unspecified or unapproved by the Landscape Architect. At the Owner's Project Representative's discretion, the Contractor may be asked to remove unspecified or unapproved plant material and replace with approved plant material.

Larger plants than those specified can be used upon approval of the Landscape Architect or Owner's Project Representative. The use of larger plants shall not increase the contract price. The root ball, root spread and container size of the larger specimen shall be proportionally increased, relative to the specified size.

DELIVERY, STORAGE AND HANDLING
The Contractor is to arrange for the acceptance and unloading of plants at the project site.

All plants are to be labeled by plant name and size. Labels shall be attached securely to all plants, bundles, and containers of plant materials when delivered. Labels shall be durable and legible, with information given in weather-resistant ink or embossed process lettering.

Prices listed for the reserved plant material are the not to exceed prices quoted by the nursery. If a Landscape Contractor is entitled to any special pricing from the nursery, it should be reflected in the bid price with any savings passed on to the Owner.

All plant materials, shipments and deliveries shall comply with current state and federal laws and regulations governing the inspection, shipping, selling and handling of plant stock. If required by law or regulation, a certificate of inspection, or a copy thereof, for injurious insects, plant diseases, and other plant pests shall accompany each shipment or delivery of plant material. The certificate shall bear the name(s) and address(es) of the source of the plant stock.

During transport, no plant shall be bound with rope or wire in a manner that damages trunks or breaks branches. Plants shall also not be dragged, lifted or pulled by the trunk, branches or foliage in a damaging way. No plant shall be thrown off of a truck or loader to the ground.

Prior to installation, all plants must be protected from sun and drying winds.

Containerized or balled and burlapped plants not being installed immediately must be kept in a shaded area, well-covered with wood chips, soil, or other approved material, and kept well-watered. Install all plants within three (3) days of delivery.

Cover roots of bare root plants with a moist tarp, burlap, sphagnum moss, or mulch while being transported to, or while being held at the project site. Soak the bare roots overnight in water before planting. Just before planting, extend the roots carefully into a natural position, free of bunching, kinking or circling. Cut back all broken or damaged roots to a point clean and free of rot. No additional root pruning is allowed. Carefully work backfill mix among the roots while simultaneously watering.

Fertilizer shall be delivered to the site in original, sealed containers, and stored in a waterproof space. Containers shall bear the manufacturer's name, analysis, trademark and guarantee as per standards of the Illinois Department of Agriculture.

SITE CONDITIONS

It is the responsibility of the Contractor to be aware of all surface and sub-surface conditions, and to report any circumstances that would negatively impact the health of plantings. Examine the sub-grade per 3.1 Site Examination. Do not proceed with work until unsatisfactory conditions have been corrected. Proceeding with work constitutes acceptance of existing or corrected conditions.

It is the responsibility of the Contractor to be familiar with the local growing conditions, and if any specified plant material will be in conflict with these conditions. Landscape Contractor to report any potential conflicts to the Owner's Project Representative.

Do not install plant materials into saturated or frozen soils. Do not install plant materials during inclimate weather, such as rain or snow or during windy conditions.

JOB CONDITIONS

Contractor shall protect all plants, lawns, and grass areas from damage at all times. Damaged plants, lawns or grass areas shall be replaced or treated as required to conform with specifications herein for fresh stock.

Work areas shall be kept clean and orderly during the installation period. Under no condition shall debris from planting activities result in a safety hazard on-site or to adjacent off-site property.

Damage to lawns or grass areas incurred as a result of replacement operations shall be repaired by Contractor at no cost to Owner.

GUARANTEE

Plants shall be healthy, free of pests and disease, and in flourishing condition at the end of the guarantee period. Plants shall be free of dead and dying branches and branch tips, and shall bear foliage of normal density, size, and color for the species.

Plants shall be guaranteed for a period of one year after the date of Acceptance. When the work is accepted in parts, the guarantee periods shall extend from each of the partial acceptances to the terminal date of the last guarantee period. Thus, all guarantee periods terminate at one time.

Plants that are dead or not in a vigorous, thriving condition, as determined by the Owner's Project Representative during and at the end of the guarantee period, shall be deemed unacceptable. Contractor to replace unacceptable material without cost to the Owner, as soon as weather conditions permit and within the specified planting period.

The Contractor is responsible for the condition and quality of work and materials during construction, and until Acceptance. Contractor shall bear the total cost of replacing any and all plant material until this time. Supplemental Planting Aids shall be used at the discretion of the Contractor to ensure the performance of this specification. The Contractor is responsible for the work, whether Planting Aids were used or not.

The Contractor is exempt from replacing plants, after Acceptance and during the guarantee period, that are removed by others, lost or damaged due to occupancy of project in any part, lost or damaged by a third party, vandalism, or any natural disaster.

Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this Specification. Make all necessary repairs due to plant replacements. Such repairs shall be done at no extra cost to the Owner.

The guarantee of all replacement plants shall extend for an additional one-year period from the date of their acceptance after replacement. In the event that a replacement plant is not acceptable during or at the end of the said extended guarantee period, the Owner may elect one more replacement items or credit for each item. These replacement items are not protected under a guarantee period.

At the end of the guarantee period, and no less than five days prior to final inspection, tree wrap, ties, and guying shall be removed from the site. Tree wraps should not be on trunks during active growing seasons. All trees that have leaned or fallen over shall be straightened. The guarantee period for any leaned or fallen trees will be extended by one year after being straightened. Final Acceptance will be given only when all the requirements of the section have been met.

The guarantee shall not cover damage from vandalism, animals, freezing rains, or winds of sixty (60)

miles per hour or greater, if the Contractor burlaps or otherwise protects any plants that he/she feels could be damaged during the guarantee period.

At any time during the guarantee period, the Contractor shall remove or replace, without cost to the Owner, and within a specified planting period, all plants not in a healthy and flourishing condition as determined by the Landscape Architect or Owner's Project Representative.

Replacement plants shall be subject to the same specified requirements of the contract. The guarantee of replacement plants shall extend until June 30 after the end of one full growing season. In the event that a replacement plant is not acceptable during, or at the end, of the said guarantee extension period, Owner may choose between subsequent replacement or credit for that item.

General: Supplemental planting aids shall be used at the discretion of the Contractor to ensure that plantings meet the requirements at the end of the guarantee period. The Contractor is responsible for the condition of the plant material, whether planting aids are used or not. Use of supplemental planting aids will be incorporated as part of the Contractors bid, and their use will not incur an additional cost to the Owner. Any of these items may be required by the Owner's Project Representative.

Anti-Desiccant: Anti-Desiccant shall be applied to ensure transported trees and shrubs are not affected by damaging winds during transit. Anti-Desiccant may also be applied to ensure the survival of newly planted trees and shrubs through the winter.

Tree Staking and Guying: Tree guying shall be provided wherever shown on the landscape plans. In addition to the trees shown on the plan, additional trees may be guyed as deemed necessary by the Landscape Contractor and approved by the Landscape Architect. Additional trees to be guyed shall not be an additional cost to the Owner but shall be included within the Landscape Contractor's original proposal. The Landscape Contractor is responsible for the tree's condition under the warranty regardless of whether the tree was guyed.

Tree Wrapping: Wrap shall be installed in the fall only and removed in the spring. Summer plantings do not require tree wrapping. No wrap shall be allowed to remain over active growing seasons.

SUBMITTALS
Product Data: For each indicated product (and substitute if necessary) that requires approval by the Landscape Architect. Provide submittal before beginning construction.

Material Certificates: Submit material certificates for all products. Provide submittal before beginning installation.

Plant Material Samples: Showing full range of perennials and groundcovers available. Provide submittal before beginning construction

Soil Testing: Submit results of soil test, as directed in this specification. Provide submittal before beginning construction.

Percolation Test: After the Contractor has performed percolation tests in Part 3, the Contractor shall submit a log of the percolation rates, with a plan outlining the locations of each test pit before planting trees. Provide submittal before beginning construction

Tagging Log: Contractor shall keep a log detailing information for each tagged tree. Such information includes the source nursery where the material is tagged, location within nursery, size of trees, any tag or seal numbers, colors of flagging tape, canopy height, spread, and branching height. Provide submittal before beginning construction.

Site Visit Record: After each site visit during the guarantee period, the Contractor shall submit a written record of the visit, including any problems, potential problems, and any recommended corrective action.

PART 2 - PRODUCTS

PLANT MATERIAL: GENERAL
Provide trees and plants of quantity, size, genus, species, and variety or cultivars as shown and scheduled in contract documents. All plant material shall conform to ANSI Z60.1 "American Standard for Nursery Stock", unless specified otherwise by the Landscape Architect. In no case shall ball size be less than 11 inch in diameter for each inch of caliper.

Plants shall have outstanding form; symmetrical, heavily-branches with an even branch distribution, densely foliated and/or budded, and a strong, straight distinct leader where this is characteristic of the species. Plants shall possess a normal balance for the species between height and spread. The Landscape Architect shall be the final arbiter of acceptability of plant form.

Provide healthy, vigorous stock, grown in a recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae, and defects such as knots, scrapes, broken or split branches, fresh limb cuts, sunscald, injuries, abrasions, or disfigurement. All graft unions shall be completely healed, free of extreme succulence.

All trees and shrubs shall be dug prior to leafing out (bud break) in the spring or when plants have gone dormant in the fall except for the following species, which are only to be dug prior to leafing out in the Spring:

1.	*Alnus varieties*	*15.*	*Malus – in leaf*
2.	*Betula varieties*	*16.*	*Nyssa sylvatica*
3.	*Carpinus varieties*	*17.*	*Ostrya virginiana*

4.	*Celtis varieties*	18.	*Populus varieties*
5.	*Cercidiphyllum varieties*	19.	*Prunus – all stone fruits*
6.	*Cornus varieties*	20.	*Pyrus varieties*
7.	*Crataegus varieties*	21.	*Quercus–all oaks except Q. palustris*
8.	*Fagus varieties*	22.	*Salix – weeping varieties*
9.	*Halesia varieties*	23.	*Syringa reticulata*
10.	*Ilex opaca varieties*	24.	*Taxodium distichum*
11.	*Koelreuteria paniculata*	25.	*Tilia tomentosa varieties*
12.	*Larix varieties*	26.	*Ulmus species*
13.	*Liquidambar varieties*	27.	*Viburnum lentago*
14.	*Liriodendron varieties*	28.	*Zelkova species*

Owner may request a written list of the proposed sources of nursery stock within seven (7) days after the bid opening. This list may not be added to or otherwise altered without the consent of Owner's Project Representative.

B&B PLANT MATERIAL
Provide quality plant material of height or caliper scheduled or shown and with branching configurations and spread characteristics as recommended by ANSI Z60.1. All root ball dimensions shall conform to the recommendations in ANSI Z60.1.

TREES: Provide quality single-stem balled and burlapped (B&B) deciduous trees, except where special forms are shown or listed.

SHRUBS: Provide quality single-stem or caned balled and burlapped (B&B) deciduous shrub, except where special forms are shown or listed.

EVERGREENS: Provide quality balled and burlapped (B&B) evergreens with well-balanced form complying with requirements for other size relationships to the primary dimension shown. Landscape Architect has the option to specify evergreen shrubs by height.

LARGE-CALIPER TREES: Provide quality single-stem balled and burlapped (B&B) deciduous trees, except where special forms are shown or listed.

1. Provide trees of height and caliper scheduled or shown and with branching configuration recommended by ANSI Z60.1 for type and species required. Provide single stem trees except where special forms are shown or listed. Provide balled and burlapped (B&B) trees as specified on the drawings.

2. Trees shall be root-prune a minimum of one growing season before transplanting. All root-pruning shall be done by hand, with sharp, clean, rust-free shears.

3. After tree has been root-pruned, ensure that the rootball is watered regularly by hand and by

using watering bags. Do not rely on automatic spray irrigation, and do not overwater. Check the soil moisture of the rootball with a soil probe, making sure that the moisture level remains moist.

4. Large-caliper trees shall be dug prior to bud-break in the spring, for spring-dig only plants. Trees shall not be dug between bud-break and hardening-off period in early-summer. Trees shall not be dug in the summer, without the written permission of the landscape architect. Oversize rootballs shall be dug when planting at the edges of planting periods. Ensure that the cultivation soil on-top of the rootball has been removed prior to digging. The trees root flare shall be visible after the rootball has been dug.
5. The Landscape Architect has pre-approved the specimen trees labeled "Gymnocladus diocia," at Kaneville Tree Farm, Phone: (630) 557-2793. Contractor may submit alternates as per approval of the Landscape Architect.

CONTAINER GROWN PLANT MATERIAL
Container grown plants shall consist of groundcovers, vines, annuals, perennials

Provide plants established and well rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ANSI Z60.1 for the pot size shown or listed.

Soil: See specifications for Landscape Fill Soil and Topsoil Furnish and Place, Special.

Fertilizer: Granular, non-burning product composed of not less than fifty (50) percent organic slow-acting, guaranteed analysis professional fertilizer. Commercial fertilizer shall conform to Illinois State Statutes, Section 94.64, and meet the standards of the Illinois Department of Agriculture as to registration and labeling. Fertilizer shall be specified in the contract documents as to composition, but is subject to revision to suit project site conditions.

OTHER MATERIALS
Fertilizer: Fertilizer for planting shall be a complete fertilizer, part of the elements of which from organic sources, and shall contain the following percentages by weight: (5-10-5). Nitrogen 5%, Phosphoric Acid 10%, Potash 5%. It shall be uniform in composition, dry, free-flowing, and shall be delivered to the site in the original unopened containers, all bearing the manufacturer's guaranteed analysis.

Fertilizer for refertilization during maintenance period shall be (20-20-20).

Holly Tone Fertilizer: Fertilizer shall be low nitrogen-grade fertilizer, to be used per the manufacturers recommendation for Broadleaf Evergreens.

Microrhyzome Stimulant: 3-3-3m. Submit specifications for Landscape Architect's approval. Stiumulant shall be watered in at the root zone to promote root growth. Deciduous and evergreen microrhyzome products shall be used according to manufacturer's recommendations.

Mulch: Provide 100% aged fine-shredded hardwood mulch, of uniform size and free from rot, leaves, twigs, debris, stones, fungus, crabgrass rhizomes, or any material detrimental to plant growth. Mulch shall have been shredded and stockpiled no less than two years before use, having gone through the dehumidification process, free of material detrimental to healthy plant growth. Mulch shall be 1/8" nominal thickness, with at least fifty (50) percent having an area of not less than 1 sq. inch, and no piece having an area of more than 6 sq. inches.

Tree Guying Stakes: 6-8 foot long sections of unflanged metal, or 2" x 2" hardwood.

Tree Guying Support ties: 2" or wider bands of polypropylene, or elasticized or webbed strapping.

Tree Wrapping material: Biodegradable geotextile (fabric) trunk wrap, or waterproofed crepe wrapping paper, secured with 1" wide masking tape.

Anti-desiccant: If required as protection for leaf surfaces, anti-desiccant shall be permeable to permit transpiration, and mixed and applied in accordance with manufacturer's specifications. Emulsion type, film-forming agent designed to permit transpiration but retard excessive loss of moisture from plants. Submit specifications for Landscape Architect approval. Deliver in manufacturer's fully identified containers and use in accordance with manufacturer's instructions.

PART 3 - EXECUTION

SITE EXAMINATION
Examine the surface grade for any circumstances that might be detrimental to plant growth, such as deposits of construction-related waste. Examine the grading, verify all elevations, and notify Owner's Project Representative in writing of any unsatisfactory conditions.

Examine the sub-grade for evidence of compaction. Examine rubble conditions as to extent shown on Soil Borings, observe the conditions under which work is to be performed, and notify Owner's Project Representative in writing of any unsatisfactory conditions.

Percolation Test: Prior to the procurement of plant material, the Contractor is mandated to perform percolation tests to determine the permeability of the sub-grade. For every 5-15 trees and shrubs in a general area, excavate a 12" diameter x 12" deep test pit. Fill each excavation with water and allow water to percolate out. Test pits shall be roped off at all times, and filled in when test is complete. If water does not percolate out over a 12 hour period, contact Owner's Project Representative. Although only one tree percolation test is required for every 15 trees, the Landscape Contractor is still responsible for ensuring that every tree drains properly. Landscape Contractor to submit Percolation Test Log to Owner's Project Representative before procuring plant material at nursery.

Examine the conditions adjacent to the project site related to wildlife, pests, or other nuisances. Advise Owner's Project Representative of potential threats from adjacent conditions with corrective recommendations.

DELIVERY, STORAGE AND HANDLING

Do not prune prior to delivery unless otherwise approved by Landscape Architect or Owner's Project Representative. Do not bend or bind-tie trees or plants in a way that damages bark, breaks branches, or destroys natural shape. Provide protective covering during delivery.

If deciduous trees are moved when in full-leaf, spray with an approved anti-desiccant per manufacturer's recommendations at nursery no greater than 48 hours prior to digging, and again 2 weeks after transplanting. Spraying should take place in early morning hours with foliage at maximum turgidity. It is the responsibility of the contractor to decide if anti-desiccant shall be applied to the tree before delivery.

Evidence of improper digging, inadequate protection following digging, carelessness while in transit, evidence of desiccation or wind-related damage, or improper handing or storage, shall be cause of rejection.

Do not drop balled and burlapped stock during delivery or handling. Evidence of cracked or damaged rootball shall be cause for rejection. Should the roots be dried out, large branches be broken, ball of earth broken, loosened, or undersized, or areas of bark be torn, the Landscape Architect will reject the injured plant.

Deliver trees and plants after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery:

Set trees and plants in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.

The duration, method and location of storage of plant materials shall be subject to the approval of the Owner's Project Representative.

Provide proper spacing for trees, such that the stockpiled plant material has full access to light and air. Take all precautions to prevent defoliation of stockpiled material.

Plant material subject to improper storage procedures shall be rejected as per the Delivery, Storage, Handling section.

Contractor shall determine if there is sufficient space available to properly stockpile plant material at the time of bidding.

Do not remove container-grown stock from containers until planting time. Plant container-grown stock immediately once removed from container.

PLANTING SEASON
Planting shall only be performed when weather and soil conditions are suitable for planting the materials specified in accordance with locally accepted practice. Install plant materials during the planting time as described below unless otherwise directed by the Owner's Project Representative. Note exceptions in Part 2 within this section.

Deciduous Trees:	March 15 - June 30 and September 1 – November 15
Deciduous Shrubs:	April 1 – June 30 and September 1 - November 15
Perennials and Groundcover:	May 15 - July 15 and September 1 - October 15
Vines:	May 15 – July 15 and September 1 – October 15
Evergreen Trees and Shrubs:	March 15 – June 30 and September 1 – October 15

COORDINATION WITH LAWNS
Plant trees and shrubs after final grades are established and prior to planting of lawns unless otherwise acceptable to Owner's Project Representative. If planting of trees and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns and any other elements resulting from planting operations.

COORDINATION WITH PROJECT WORK
The Contractor is responsible for investigating, and being aware of, the work requirements of their sub-consultants and other consultants. The Contractor shall coordinate with all other work that may impact the completion of the work.

Irrigation: Irrigation lines and heads encountered during the excavation process shall be avoided and retain a minimum of damage. When unavoidable, irrigations shall be traced to their nearest connection and removed. The open end of the irrigation line shall be capped to prevent clogging. The site of a disconnected irrigation line shall be flagged after excavated soil has been backfilled.

PREPARATION
The Contractor shall:

Receive Owner approval of staking layout prior to excavation.

Stake all planting areas and notify JULIE Hotline (1-800-892-0123 statewide) to verify location of all underground utilities prior to excavation.

Contractor shall carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.

Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually

agreed upon by parties concerned. The Landscape Contractor is responsible for knowing the location and avoiding utilities that are not covered by JULIE.

Excavate planting areas as shown in the contract drawings.

Adequately barricade with proper warning devices any planting pit left open when planting work is not in progress, and that poses a hazard to vehicles and/or pedestrians.

Notify the Owner Project Representative in writing of any soil conditions, obstructions, or concerns about water drainage deemed detrimental to healthy plant growth. These conditions or obstructions shall be detailed, along with any suggestions for correction, removal or relocation. Where soil conditions, poor drainage or other obstructions are encountered that cannot be easily remedied, the Project Representative will designate alternate locations, and will bear the additional costs of such relocation.

The planting pit for containerized and balled and burlapped plants shall be at least 2.5 to 3 times the diameter of the soil ball, or to a dimension otherwise specified.

The planting pit for a single shrub shall be 12" wider than the root ball.

Loosen the soil beyond the edge of the planting pit. The soil at the base of the planting pit is to remain undisturbed, the depth of which shall correspond to the distance from the bottom of the soil ball to the root flare, or slightly less.

Planting pits for bare root plants shall be only broad enough to receive the full extension of the roots when the plant is set, and only deep enough to set the uppermost roots just below existing grade.

For a shrub mass planting, the entire bed area is to be tilled to a depth of 4-6". Excavate individual shrub pits to the proper depth.

INSTALLATION OF B&B TREES AND SHRUBS
When applicable, plant trees before adjacent shrubs, groundcovers, vines and other plants are in place. Where spacing dimensions or locations are not clear, notify the Owner's Project Representative before installation.

Excavate pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Owner's Project Representative before planting. Dispose of fill soil removed from planting excavations. Do not mix with topsoil or use as backfill.

Scarify hard fill soil around perimeter of undisturbed tree ball pedestal and on top 12" of undisturbed soil to create a transition layer. Do not scarify top of undisturbed soil.

Set balled and burlapped (B&B) and container stock on layer of undisturbed subgrade, as indicated on the drawings, plumb and in center of pit or trench with top of ball three (3) inches above adjacent finished landscape grades. The root flare and tree graft, if applicable, shall be visible at the top of the root ball, above the grade. If the root flare or tree graft is located below the top of the root ball, as received from the nursery, the Contractor shall remove the root ball soil to just below the root flare.

Trees shall be oriented so their north side, as marked in the nursery, faces north. The Owner's Project Representative may require trees to be oriented in another direction based on the form of the tree or other conditions.

When set, brace rootball by tamping backfilled soil around the lower portion of the rootball. Place additional backfill around base and sides of ball in six-inch (6") lifts. Work each lift to settle backfill and eliminate voids and air pockets. When excavation is approximately two-thirds full, water thoroughly before placing remainder of backfill. Ropes or strings on top of ball shall be cut and shall be pulled back. Burlap or cloth wrapping shall be cut and removed. Non-biodegradable ball wrapping and support wire baskets shall be totally removed from ball and planting pit. Plastic, wood containers and root-bags shall be totally removed from ball and planting pit.

Repeat watering until no more is absorbed. Water again after placing final layer of backfill.

Remove all nursery plant identification tags and ribbons. Landscape Architect seals are to remain on plants until the end of the guarantee period, or as directed by Landscape Architect. The Contractor shall remove Landscape Architect seals once Final Acceptance has been given by the Owner.

All evergreen plant material shall have anti-desiccant applied to it for Fall installations.

INSTALLATION OF CONTAINER GROWN PLANTS

All plants in divided containers (flats) shall be planted on-center, as indicated on plans. Contact Owner's Project Representative if specified quantity of groundcover or vine does not fill the space per the specified on-center spacing. Make adjustments as directed by Owner's Project Representative.

Dig holes large enough to allow for spreading of roots and backfill with topsoil. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover crowns of plants with wet soil.

To adjust soil pH to acidic: After the specified planting mix is installed and just prior to the installation of the container planting, spread 3"-4" of specified peat over the area designated and rototill into the top 2"-3" of the planting mix.

Allow the finished grades to remain 2"-3" higher than the grades on the grading plan to anticipate settlement over the first year. At the end of the planting guarantee period, reset the grades in this

area, if required, to the final grades shown on the grading plan (if applicable).

PLANTING OF TREES AND SHRUBS

Remove plant containers by cutting or carefully inverting the container. For plants grown in plastic containers slash the edges of the root ball from top to bottom with vertical 1" cuts using a sharp blade.

Root balled plants shall have rope, string, wire baskets, burlap and other wrapping material removed from the top half of the ball after the plant has been set in the hole. Remaining wrappings, other than those made from plastic or synthetic material, may be left around the bottom half of the ball.

If deciduous species are planted in leaf, they may be sprayed with an approved anti-desiccant prior to planting when so directed by the Owner's Project Representative.

Trees and shrubs grown using root containment material shall have the containment bag removed prior to setting.

Set trees and shrubs straight and upright, and in the center of the planting hole and on the unexcavated base of the planting pit, with the most desirable face towards the most prominent view.

Root-balled shrubs are to be carried and set in the hole by the root ball.

Backfilling: Backfill pits with excavated soil. No soil in frozen or muddy condition shall be used for backfilling.

When pit is approximately two-thirds backfilled, tamp down and water to eliminate air pockets. After initial watering, add remainder of the soil to the top of pit, water without puddling, and firmly tamp without overcompacting. Form a 2-3" high saucer around the outer rim of the pit prior to mulching.

PROTECTION DURING CONSTRUCTION

The Contractor shall protect landscape work and materials from damage due to landscape operations, operations by other Contractors or trespassers. Maintain protection during installation until acceptance. Treat, repair or replace damaged landscape work immediately.

Damage done to plant materials, or any of the work, by the Contractor, or any of their sub-consultants, shall be replaced by the Contractor at no expense to the Owner.

FINISHING

Finish-grade planting areas to required elevations after plants have fully settled.

No soil is to cover the top of the root ball. All plants shall be completely mulched over the root system with a 3" layer of specified mulching material immediately after planting. Pull back mulch

no less than 3" and no more than 6" from the trunk. Mulch top of rootballs and ground cover beds, covering the entire planting area. Provide the following thickness of mulch. Top of mulch shall be level in all directions.

Tree and shrub planting areas:	3-inch thickness
Groundcover and vine planting areas:	1-inch thickness
Vine planting areas only:	1-inch thickness for a 30" diameter with the ivy plant at the center.

In no case shall mulch come in contact with any part of trunk or root flare.

Excess mulch shall be removed and disposed of off-site. Contractor shall not over-mulch planting beds with excess mulch.

Lay weed control fabric over grade prior to mulching as per manufacturer's recommendations. Secure to slopes with "T"-shaped pin anchors.

Thoroughly water plants immediately after planting and before mulching, primarily within and filling the saucer.

Wrapping: Only trees so designated shall be protected with tree wrap. Secure wrapping at a minimum of 5 locations, including the top, middle and bottom of the trunk. Cover the trunk's entire surface in a spiral manner, starting at the tree's base and extending to just below the height of the lowest main branches. Overlap material at 1/2-1" (1.3 - 2.5 cm). Owner will be responsible for removing the tree wrap after a recommended period.

Prune any dead or broken branches. Prune newly-planted hedges as directed by the Owner's Project Representative.

Remove all twine and rope after planting, along with any labels attached around trunks or branches. During installation, keep pavements clean and work area in an orderly condition.

Keep the site free of garbage at all times. Immediately dispose of wrappings or waste materials associated with products necessary for the completion of the work.

All garbage shall be kept in a central collection container. Do not bury garbage in back-fill.

Once installation is complete, remove any excess soil from pavements or embedded fixtures. Ensure that mulch is confined to planting beds and that all tags and flagging tape are removed from the site. Landscape Architect seals are to remain, as per the Installation of B&B Trees and Shrubs section.

Large-Caliper Trees and Low-Branching Trees: The mulch ring for large-caliper trees and low-branching trees shall be eight feet (8') in diameter, as shown in the drawings.

STAKING
Stake only those individual plants designated on-site by Owner's Project Representative.

Space stakes evenly outside of, and driven clear of, the root ball. Stakes are to be driven at an angle then drawn to vertical.

Ties made of approved material shall be directly attached to the stakes or may be attached to the stakes by wire. In no case shall wire extend around the tree trunk, instead, thread wire through rubber hose sections that loop around the trunk. Attach ties so as to allow for 1-3" of sway in the trunk. For drooping stems, ties shall be placed at the point on the stem at which the top can then stand on its own.

Staking shall conform to any additional directions found in the drawings.

INSPECTION & ACCEPTANCE
Owner's Project Representative and a representative of the grounds department responsible for maintenance following acceptance shall perform inspections with the Contractor of all plant material at one (1) week and three (3) week intervals (or other specified interval) after the original planting to note and correct any discrepancies from the contract. Plants that are alive and healthy following the three (3) week (or other time frame specified) inspection shall be accepted.

Acceptance of plant material by Landscape Architect shall reflect general conformity with the *American Standards for Nursery* Stock as to specified size, character and quality. Acceptance shall not relieve the Contractor of responsibility for full conformity to the contract documents and the guarantee period. Any defects or imperfections appearing in whole or any part of the work caused by or due to any fault or negligence on the part of the Contractor shall be corrected before the work is accepted.

Planting work may be accepted in stages when the Contractor and Owner's Project Representative deem that practice to be in their mutual interest. Approval must be given in writing by Owner to the Contractor verifying that work may be completed in stages. Acceptance of planting work in stages shall not waive any other provisions of the contract.

CLEANING
Soil, branches, binding and wrapping material, rejected plants, or other debris resulting from plant installation shall be promptly cleaned up and removed. New landscape construction in and around the planting areas are to be especially well-cleaned.

MAINTENANCE
Fertilizing: Any and all chemical applications are to be performed in accordance with current federal, state and local laws, through EPA-registered materials and application techniques, and performed under the supervision of a licensed certified applicator. Apply fertilizer to planted areas at the

specified rate, and as per manufacturer's recommendations.

Water used shall be of sufficient quality for irrigation and free of materials harmful to plant growth.

Pesticide: Any use of pesticides during the contracted maintenance period, as determined by the Owner, shall utilize the minimum amount of approved pesticide needed to control pests on plant materials installed under the contract. Pesticide applications are to be performed in accordance with current federal, state and local laws, through EPA-registered materials and application techniques, and performed under the supervision of a licensed certified applicator. Apply at the specified rate, and as per manufacturer's recommendations.

PLANT MAINTENANCE
During the project, the Contractor shall maintain the site, including completed work and existing conditions. Once the project is complete, the Contractor shall make periodic site visits to inspect the site. A written record of each visit shall be submitted to the Landscape Architect.

Maintenance shall consist of pruning, watering, cultivating, weeding, mulching, removal of dead material, repairing and replacing of tree stakes, tightening and repairing of guys, repairing and replacing of damaged tree wrap material, resetting plants to proper grades and upright position, and furnishing and applying such sprays as are necessary to keep plantings free of insects and disease, and in healthy growing condition. Planting areas shall be kept free of weeds, grass, and other undesirable vegetative growth. Contractor shall make periodic site visits for the duration of the guarantee period.

The following maintenance regime shall be followed:

The Contractor shall perform a 90-day maintenance regime, to begin upon Acceptance of the work. The Contractor shall provide the Owner with a detailed description of the necessary requirements to sustain the work until the end of the guarantee period.

Fall Installation: Maintenance shall begin immediately after installation and shall continue for a 90-day period after Acceptance of that area. Fall shall be defined as the period from September 15 – December 1. If the 90-day period exceeds December 1, the remaining days of the maintenance period will begin March 15.

Spring/Summer Installation: Maintenance shall begin immediately after installation and shall continue for a 90-day period after Acceptance of that area. Spring / Summer shall be defined as the period from March 15 – September 15.

PRUNING
Prune in accordance with current *American National Standards (ANSI) for Tree Care Operations*. Perform all pruning work in a manner consistent with the landscape design intent. Plants overhanging and blocking pedestrian and/or vehicular paths shall be pruned as needed to allow the

desired clearance.

Except in the cases of hedges, or to conform to some design intent, all pruning of ornamental trees, shrubs and ground covers should aim to retain their natural shapes. With multiple leader plants, preserve the leader that best promote the plant's symmetry. Prune branches of deciduous stock to improve the branch structure of the plant.

Trim oaks, honey locusts, and elms while dormant to reduce disease risk. Other trees may be trimmed at other times of the year, except during leaf-out, or at the time of leaf drop. If oaks, elms or honey locust are specified for pruning during the non-dormant period the Contractor must seal completely all pruning wounds immediately after each cut with a wound dressing approved or designated by Landscape Architect.

Plants that flower before late spring should be pruned immediately after flowering. Those that flower in summer or fall should be pruned in winter or spring before new growth emerges.

Prune evergreens only to remove dead, broken or damaged branches. Prune yews, junipers, hemlocks and arborvitae after new growth has hardened off in late summer.

Where necessary, repairs to damaged wood shall be performed under the direction of Landscape Architect, or a certified arborist.

Prune using scissors-style cutting devices, and not anvil-style handpruners, pole pruners or loppers.

The Contractor shall remove all trimmed branches and other debris from the site at the end of each work day.

PRUNING OF TREES AND SHRUBS
Each tree and shrub shall be pruned to preserve the natural character of the planting. Remove and replace excessively pruned or misformed stock resulting from improper pruning.

Pruning shall be done with clean, sharp, rust-free tools. Cuts shall be made flush, leaving no stubs as per ANSI A 300 - 1995. No tree paint or sealants shall be used.

Dead wood, suckers, and broken and badly bruised branches shall be removed. Do not prune plant material that has been severely damaged due to transit or handling.

Pruning of broken or dead branches shall be done after planting, and before punchlisting. Pruning procedures shall be reviewed with Owner's Project Representative before proceeding. Landscape Contractor shall only proceed with pruning in the manner approved by the Owner's Project Representative.

Form-corrective pruning may occur when tree has hardened until bud-break in the spring. If

corrective pruning dates fall outside the construction schedule, it shall remain a punchlist item. The Contractor shall be responsible for completing this off-season punchlist item.

Large-Caliper Trees: Do not prune large-caliper tree(s), except for broken branches and minor crossover branches, as directed by the Owner.

BASIS OF PAYMENT

Trees will be measured in place as individual plants. Only acceptable plants will be measured for payment. This work will be paid at the contract unit price per each for several kinds and sizes of TREES (SPECIAL), which price shall include all materials, labor and equipment to perform the work as described herein.

END OF SECTION

X0323407 FLAG POLES
XX007857 TRASH RECEPTACLE, FURNISH AND INSTALL
Z0003855 BICYCLE RACKS
Z0004002 BOLLARDS

PART 1 - GENERAL

DESCRIPTION

A This Work shall be performed in accordance with Section 503 of the Standard Specification (IDOT) and as modified herein to include the following site furnishings:

1. Flag Pole
2. Trash receptacles.
3. Bicycle racks.
4. Bollards

Concrete bases for each of the site furnishing items shall be as detailed on the plans and as specified in the section MISCELLANEOUS CONCRETE.

SUBMITTALS

A Product Data: For each type of product indicated.

B Samples for Verification: For each type of exposed finish required, prepared on not less than 6-inch- long linear components and 4-inch- square sheet components.

C Product Schedule: For site furnishings. Use same designations indicated on Drawings.

QUALITY ASSURANCE

A Source Limitations: Obtain through one source from a single manufacturer.

EXTRA MATERIALS

B Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Trash Receptacle Inner Containers: 5 full-size units for each size indicated, but no fewer than 2 units

PART 2 - MATERIALS

GENERAL MATERIALS

A Steel and Iron: Free of surface blemishes and complying with the following:

1. Steel Pipe: Standard-weight steel pipe complying with ASTM A 53, or

electric-resistance-welded pipe complying with ASTM A 135.

2. Tubing: Cold-formed steel tubing complying with ASTM A 500.
3. Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A 513, or steel tubing fabricated from steel complying with ASTM A 1011/A 1011M and complying with dimensional tolerances in ASTM A 500; zinc coated internally and externally.

B Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; free of surface blemishes and complying with the following:

1. Castings: ASTM B 26/B 26M.

C Wood: Surfaced smooth on four sides with eased edges; kiln dried, free of knots, solid stock of species indicated.

1. Wood Species: Ipe with manufacturer's standard finish.

D Plastic: Color impregnated, color and UV-light stabilized, and mold resistant.

1. Polyethylene: Fabricated from virgin plastic HDPE resin.

E Anchors, Fasteners, Fittings, and Hardware: Stainless steel; commercial quality, tamperproof, vandal and theft resistant.

F Galvanizing: Where indicated for steel and iron components, provide the following protective zinc coating applied to components after fabrication:

1. Zinc-Coated Tubing: External, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. of zinc after welding, a chromate conversion coating, and a clear, polymer film. Internal, same as external or consisting of 81 percent zinc pigmented coating, not less than 0.3 mil thick.
2. Hot-Dip Galvanizing: According to ASTM A 123/A 123M, ASTM A 153/A 153M, or ASTM A 924/A 924M.

BICYCLE RACKS

A Basis-of-Design Product: Subject to compliance with requirements, provide Bike Hitch by Dero Bike Racks or a comparable product approved by Engineer.

B Bicycle Rack Construction:

1. Frame: Galvanized steel.
   a. Center Beam: 2" Pipe OD, Schedule 40.
   b. Ring: 1.5" OD 11 gauge CREW 1018 grade tube.
2. Style: Double-side parking.

3. Security: Designed to lock wheel and frame.
4. Installation Method: Flush mount with epoxy anchor or expansion bolt.

C Steel Finish: Color coated.

1. Color: As selected by Engineer from manufacturer's full range.

TRASH RECEPTACLE

A Basis-of-Design Product: Subject to compliance with requirements, BigBelly Solar Compactor or comparable product approved by Engineer.

1. BigBelly Solar
   50 Brook Road
   Needham, MA. 02494
   Telephone: 888-820-0300

B Trash Receptacle Construction:

1. Height: 50.4", Width: 26.1", Depth: 25.9"
2. ADA compliant.
3. Bin volume: 32 gallons.
4. Compaction:1250lbs. maximum.
5. Motor size: 1/6-HP DC gear-motor, 12 volts DC
6. Drive System: Heavy duty chain drive, non-hydraulic.
7. Fully automated.
8. Galvanized sheet metal steel interior and exterior with heavy duty side panels..
9. Exterior finish: Polyester TGIC powder-coat finish for outdoor and salt-spray durability.
10. Polycrystalline silicone cell module, 30watts output.
11. Sealed maintenance free 12Vbattery with charge maintained pulse width modulator
12. Fully portable, cordless and self powered.

BOLLARDS

A Bollards and chains will be furnished by the Town of Normal. The Contractor is responsible for transporting the bollards and chains from the Town's storage site and for installation of the bollards and chains as shown on the plan details.

B Basis-of-Design Product: Subject to compliance with requirements, provide DG4 Bollard by Urban Associates or a comparable product approved by Engineer.

1. Urban Accessories, Inc.

C Bollard Construction:

1. Pipe OD: Not less than 4-1/2 inches.
   a. Steel: Schedule 40 pipe.
2. Style: Manufacturer's standard.
3. Accessories: Eye bolts and chains.
4. Installation Method: Flush mount with epoxy anchor or expansion bolt.

D Steel Finish: Color coated.

E Color: As selected by Engineer from manufacturer's full range

FLAG POLE

A Basis-of-Design Product: Subject to compliance with requirements, provide IWW45D8N-02 Internal Halyard with winch – shoe base by American Flagpole or a comparable product approved by Engineer.

1. American Flagpole

B Flagpole Construction:

1. Provide cone-tapered flagpole, per manufacturer's standard rate of taper.
2. Assembly construction: Internal with Winch – Shoe base flagpole, 55 ft. nominal mounting height, with a minimum base wall thickness of 0.188 in., and an 8 in. butt diameter. Ship to project in 2 pieces.
3. Mounting:
4. Foundation tube: Galvanized corrugated steel foundation tube, .0635 inch minimum wall thickness, sized to suit flagpole and installation. Provide with 3/16th steel bottom plate and steel centering wedges all welded together. Furnish with 3/16th inch support plate, ¾ inch diameter X 18" long steel ground spike, all welded construction.
5. Fittings:
6. Internal Halyard Truck Assembly with Hood for Cable: Cast aluminum non-fouling revolving with single pulley mounted inside hood, stainless steel roller bearings, threaded spindle for attachment to top of pole, and bronze exit bushing for cable.
7. Provided with stainless steel ball bearings.
8. Internal Halyard, Winch System: 1/8" stainless steel aircraft cable with plastic coated counterweight and beaded sling assembly. Manually operated mechanical winch having automatic brake system and operated with a removable hand crank. Winch shall be concealed inside the flagpole behind a flush access door having a cylinder lock and continuous piano hinge.
9. Aluminum Finish: Satin, 80 Grit

FABRICATION

A Metal Components: Form to required shapes and sizes with true, consistent curves, lines,

and angles. Separate metals from dissimilar materials to prevent electrolytic action.

B Welded Connections: Weld connections continuously. Weld solid members with full-length, full-penetration welds and hollow members with full-circumference welds. At exposed connections, finish surfaces smooth and blended so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.

C Pipes and Tubes: Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of handrail and railing components

D Exposed Surfaces: Polished, sanded, or otherwise finished; all surfaces smooth, free of burrs, barbs, splinters, and sharpness; all edges and ends rolled, rounded, or capped.

E Factory Assembly: Assemble components in the factory to greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

FINISHES, GENERAL

A Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

ALUMINUM FINISHES

A Baked-Enamel, Powder-Coat Finish: Manufacturer's standard, baked, polyester, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

STEEL AND GALVANIZED STEEL FINISHES

A Baked-Enamel, Powder-Coat Finish: Manufacturer's standard, baked, polyester, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness

PART 3 - CONSTRUCTION REQUIREMENTS

EXAMINATION

A Examine areas and conditions, with Installer present, for compliance with requirements for

correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

INSTALLATION, GENERAL

A Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.

B Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.

C Post Setting: Set cast-in support posts in concrete footing with smooth top, shaped to shed water. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

CLEANING

A After completing site furnishing installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

PART 4 - MEASUREMENT AND PAYMENT

A FLAG POLES: This work will be measured in place per each unit furnished and installed, which price will include labor, excavation, steel support plate and spike, formwork, sleeves, wedges, sand, concrete base materials, waterproof compound, backfill, pole, collar, paint, wedges, anchor bolts, equipment, and incidental work necessary to complete the installation as specified, and no additional compensation will be allowed.

B TRASH RECEPTACLES, FURNISH AND INSTALL: This work will be measured in place per each unit furnished and installed, which price will include labor, excavation, aggregate base and backfill, formwork, concrete base materials, receptacle, anchors, anchor bolts, screws, equipment, materials and incidental work necessary to complete the installation as specified, and no additional compensation will be allowed.

C BICYCLE RACK: This work will be measured in place per each unit furnished and installed, which price will include labor, excavation, aggregate base and backfill, formwork, concrete base materials, racks, anchors, anchor bolts and bolt installation, equipment, materials and incidentals work necessary to complete the installation as specified, and no additional compensation will be allowed.

D BOLLARDS: This work will be measured in place per each bollard installed including installing removable chains between each bollard as shown on the plans. The work under this item will include labor, excavation, aggregate base and backfill, formwork, concrete base materials, anchor pipes and threaded rods, drilling, expansion anchors anchor rods, pipes, bolts, equipment, materials and incidental work necessary to complete the installation as specified, and no additional compensation will be allowed. Bollard and chains will be furnished by the Town of Normal.

END OF SECTION

XX007860 AGGREGATE BASE COURSE, (SPECIAL)

Description

This work shall consist of constructing aggregate base course twelve (12) inches thick for pervious concrete paver sidewalks in accordance with the details shown in the plans and Section 351 of the Standard Specifications with the following exceptions.

Materials

Coarse aggregate CA 7 uniformly graded material shall be used for pervious concrete paver sidewalks and shall be in accordance with Article 1004.04 of the Standard Specifications.

Construction Requirements

The drainage geotextile fabric material shall be furnishing and installed as described in the specification for Unit Pavers.

The aggregate material shall be placed in 6 inch maximum lifts. The aggregate material shall be compacted to the satisfaction of the Engineer.

Measurement and Payment

This work will be measured and paid for at the contract unit price per square yard for AGGREGATE BASE COURSE, (SPECIAL), which price shall include furnishing, placing and compacting the material.

XX003219 UNIT PAVERS
XX003995 INTERLOCKING CONCRETE PAVERS

PART 1 - GENERAL

DESCRIPTION

A This Work shall consist of furnishing and installing unit pavers including the following:

1. Concrete pavers set in aggregate setting beds.
   a. Unit Pavers will include all Type 1, 2 and 4 pavers.
   b. Interlocking Concrete Pavers will include all Type 3 pavers.

SUBMITTALS

A Product Data: For the following:

1. Pavers, Type 1, 2, 3 and 4.

B Samples for Verification:

1. Full-size units of each type of unit paver indicated.
2. Joint materials.

QUALITY ASSURANCE

A Contractor and crew must have at least five (5) years experience in installing unit pavers on projects of similar size. The Contractor shall submit descriptions and references for five (5) successful paver installation projects completed within the past five (5) years. The submittals shall include the projects names, client names and locations. The Town has the right to interview field crew members assigned to the project to ensure adequate skills for the proposed work and may request unqualified workers be replaced with skilled workers.

B Source Limitations: Obtain each type of unit paver, joint material, and setting material from one source with resources to provide materials and products of consistent quality in appearance and physical properties.

C Mockups: Build a minimum of 6 foot by 6 foot mockup to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

D Preinstallation Conference: Conduct conference at Project.

DELIVERY, STORAGE, AND HANDLING

A Store pavers on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied.

B Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

C Store liquids in tightly closed containers protected from freezing.

PROJECT CONDITIONS

A Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.

PART 2 - MATERIALS

CONCRETE PAVERS

A Concrete Pavers, Type 1: Solid paving units, complying with article 1042.15 of the Standard Specifications and ASTM C 936, made from normal-weight concrete with a compressive strength not less than 8,000 psi, water absorption not more than 5 percent according to ASTM C 140, and no breakage and not more than 1 percent mass loss when tested for freeze-thaw resistance according to ASTM C 67.

1. Basis-of-Design Product: The design for concrete pavers is based on the Multisided Prest Brick Hexagonal Pavers by Hanover Architectural Products. Subject to compliance with requirements, provide the named product or a comparable product approved by Engineer.
2. Thickness: 2-1/4 inches.
3. Face Size and Shape: 8" hexagonal
4. Color: Tan/Charcoal blend.

B Concrete Pavers, Type 2: Solid interlocking paving units complying with article 1042.15 of the Standard Specifications and ASTM C 936 and resistant to freezing and thawing when tested according to ASTM C 67, made from normal-weight aggregates.

1. Basis-of-Design Product: The design for concrete pavers is based on Traditional Prest Brick by Hanover Architectural Products. Subject to compliance with requirements, provide the named product or a comparable product approved by Engineer.
2. Thickness: 3 inches.
3. Face Size and Shape: 4-1/2"-by-8" inch rectangle and 8" x 8" square
4. Color: Tan/Charcoal Blend.

C Concrete Pavers, Type 3: Solid interlocking paving units complying with article 1042.15 of

the Standard Specifications and ASTM C 936 and resistant to freezing and thawing when tested according to ASTM C 67, made from normal-weight aggregates.

1. Basis-of-Design Product: The design for concrete pavers is based on the 4" x 9" Permeable Paving Unit by Hanover Architectural Products. Subject to compliance with requirements, provide the named product or a comparable product approved by Engineer.
2. Thickness: 3 inches.
3. Face Size and Shape: 4 5/8" by 9 1/4" inch rectangle with spacers included in the overall dimension.
4. Color: Tan/Charcoal Blend.

D Concrete Pavers, Type 4: Solid interlocking paving units complying with article 1042.15 of the Standard Specifications and ASTM C 936 and resistant to freezing and thawing when tested according to ASTM C 67, made from normal-weight aggregates.

1. Basis-of-Design Product: The design for concrete pavers is based on Detectable Warning Pavers by Hanover Architectural Products. Subject to compliance with requirements, provide the named product or a comparable product approved by Engineer.
2. Thickness: 2 inches.
3. Face Size and Shape: 11 3/4 inches by 11 3/4 inches.
4. Color: Charcoal

ACCESSORIES

A Job-Built Concrete Edge Restraints: Comply with requirements in Division 03 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mixed concrete with minimum 28-day compressive strength of 3000 psi .

B Cork Joint Filler: Preformed strips complying with ASTM D 1752, Type II.

C Compressible Foam Filler: Preformed strips complying with ASTM D 1056, Grade 2A1.

AGGREGATE SETTING-BED MATERIALS

A Graded Aggregate for Subbase: Sound, crushed stone or gravel complying with ASTM D 2940, subbase material.

B Graded Aggregate for Base: Sound, crushed stone or gravel complying with ASTM D 2940, base material.

C Sand for Leveling Course: Sound, sharp, washed, natural sand or crushed stone complying with gradation requirements in ASTM C 33 for fine aggregate.

D Sand for Joints: Fine, sharp, washed, natural sand or crushed stone with 100 percent passing No. 16 sieve and no more than 10 percent passing No. 200 sieve.

1. Provide sand of color needed to produce required joint color.

E Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.

F Herbicide: Commercial chemical for weed control, registered with the EPA. Provide in granular, liquid, or wettable powder form.

PART 3 - CONSTRUCTION REQUIREMENTS

EXAMINATION

A Examine areas indicated to receive paving, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION

A Remove substances from concrete substrates that could impair mortar bond, including curing and sealing compounds, form oil, and laitance.

B Clean concrete substrates to remove dirt, dust, debris, and loose particles.

C Proceed with unit paver installation only after deficient subgrades have been corrected and are ready to receive subbase and base course for unit pavers. The Engineer will determine when prepared subgrade is ready for unit paver installation. Proof-rolling or other methods will be required to identify soft pockets or areas of excessive yielding.

INSTALLATION, GENERAL

A Do not use unit pavers with chips, cracks, voids, discolorations, and other defects that might be visible in finished work.

B Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.

C Cut unit pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining work neatly.

Use full units without cutting where possible. Hammer cutting is not acceptable.

1. For concrete pavers, a block splitter may be used.

D Joint Pattern: As indicated, if not indicated, as directed by Engineer.

E Tolerances: Do not exceed 1/32-inch unit-to-unit offset from flush (lippage) nor 1/8 inch in 10 feet from level, or indicated slope, for finished surface of paving.

F Expansion and Control Joints: Provide for sealant-filled joints at locations and of widths indicated. Provide foam filler as backing for sealant-filled joints, unless otherwise indicated; where unfilled joints are indicated, provide temporary filler until paver installation is complete. Install joint filler before setting pavers. Sealant materials and installation are specified in Division 07 Section "Joint Sealants."

G Provide edge restraints as indicated. Install edge restraints before placing unit pavers.

AGGREGATE SETTING-BED APPLICATIONS for concrete pavers

A Compact soil subgrade uniformly to at least 95 percent of ASTM D 1557 laboratory density.

B Proof-roll prepared subgrade to identify soft pockets and areas of excess yielding. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.

C Place aggregate subbase and base, compact to 100 percent of ASTM D 1557 maximum laboratory density, and screed to depth indicated.

D Place drainage geotextile over compacted base course, overlapping ends and edges at least 12 inches .

E Place leveling course and screed to a thickness of 1 to 1-1/2 inches , taking care that moisture content remains constant and density is loose and constant until pavers are set and compacted.

F Treat leveling course with herbicide to inhibit growth of grass and weeds.

G Set pavers with a minimum joint width of 1/16 inch and a maximum of 1/8 inch, being careful not to disturb leveling base. If pavers have spacer bars, place pavers hand tight against spacer bars. Use string lines to keep straight lines. Fill gaps between units that exceed 3/8 inch with pieces cut to fit from full-size unit pavers.

1. When installation is performed with mechanical equipment, use only unit pavers with spacer bars on sides of each unit.

H Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500- to

5000-lbf compaction force at 80 to 90 Hz. Perform at least three passes across paving with vibrator. Vibrate under the following conditions:

1. After edge pavers are installed and there is a completed surface or before surface is exposed to rain.
2. Before ending each day's work, fully compact installed concrete pavers to within 36 inches of the laying face. Cover pavers that have not been compacted, and leveling course on which pavers have not been placed, with non-staining plastic sheets to protect them from rain.

I Spread dry sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of sand on the surface for joint filling.

J Do not allow traffic on installed pavers until sand has been vibrated into joints.

K Repeat joint-filling process 30 days later.

REPAIRING, POINTING, AND CLEANING

A Remove and replace unit pavers that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment and with no evidence of replacement.

PART 4 - MEASUREMENT AND PAYMENT

A Pavers Type 1, Type 2, and Type 4 will be measured and paid for at the contract unit price per square foot for UNIT PAVERS. Pavers Type 3 will be measured and paid for at the contract unit price per square foot for INTERLOCKING CONCRETE PAVERS. The prices shall include, furnishing, layout, installation, clean-up, and any other materials, labor, or equipment required to complete the work, and no additional compensation will be allowed. The sand setting bed, crushed stone joint fill, and geotextile fabric will also be included in the cost of the pavers.

END OF SECTION

K1003455 LANDSCAPE FILL SOIL
X2110100 TOPSOIL FURNISH AND PLACE, SPECIAL

PART 1 - GENERAL

1.1 SUMMARY

A. The work in this section includes, but is not limited to, the following:

1. Furnishing, mixing and testing of topsoil, sand, light weight aggregate, organic material, and amendments to create Sandy Clay Loam Topsoil.
2. Furnishing, mixing and testing of fill soil, sand, light weight aggregate, organic material, and amendments to create Sandy Loam fill soil.
3. Installation of Fill Soil and Topsoil.
4. Compacting and grading of Fill Soil and Topsoil.

1.2 RELATED DOCUMENTS AND REFERENCES

A. Related Sections:
1. Irrigation
2. Sod
3. Plants

B. References:
1. The following references and standards are use herein and shall mean:
a. ASTM: American Society of Testing Materials.
i. ASTM C136 - Sieve Analysis of Fine & Coarse Aggregates
ii. ASTM - D3665 -Random Sampling of Construction Materials
iii. ASTM D854 – Specific Gravity of Soils
iv. ASTM D2974 - Standard Test Method for Moisture, Ash and Organic Matter of Peat and Other Organic Soils

b. USDA: United States Department of Agriculture.
i. 1984 Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples.

c. U.S. Department of Agriculture, Natural Resources Conservation Service, 2003. National Soil Survey Handbook, title 430-VI. Available Online: http://soils.usda.gov/technical/handbook/

d. Commercial Item Descriptions (CID): CID A-A-19O9-Fertilizer

e. Turf Diagnostics & Design Developed Tests
   i. A2LA Accredited Test Based on American Society of Agronomy (ASA) Methods of Soil Analysis
   ii. Water Release Characterization
   iii. USDA Particle Size Analysis
   iv. Infiltration Rate

1.3 SUBMITTALS

A. Product Data: Submit manufacturer product data and literature describing all products required by this section to Hoerr Schaudt Landscape Architects for approval. Provide all submittals a minimum of 45 days before the installation of Fill Soil and Topsoil.

B. Material Certificates: Submit material certificates for all natural and bulk material indicating that the material meets the requirements of the specification to Hoerr Schaudt Landscape Architects for approval. Provide submittal 45 days before the installation of Fill Soil and Topsoil..

1. Submit the manufacturer's material certificates for all sand and lightweight aggregate to Hoerr Schaudt Landscape Architects for approval: the manufacturer's pH and particle size analysis.

   Provide the following particle size distribution (percent passing):

Sieve
3/8" (9.5mm)
No 4 (4.75mm)
No 8 (2.36mm)
No 16(1.18mm)
No30 (.60mm)
No50 (.30mm)
No100 (.15mm)

2. Submit the manufacturer's Fines Modulus Index for all sand to Hoerr Schaudt Landscape Architects for approval.

3. Submit the manufacturer's material certificates for all compost to Hoerr Schaudt Landscape Architects for approval, the manufacturer's particle size analysis, pH, and certificate of length of composting period for all compost. Submit manufacturer's certificate that organic matter meets the requirements of the IEPA per IDOT Standards.

C. Samples: Submit samples of each product and material where required by the specification to Hoerr Schaudt Landscape Architects for approval. Label all samples to indicate product, specification number, characteristics, and locations in the Work. Samples will be reviewed for appearance only. Compliance with all other requirements is the exclusive responsibility of the contractor. Delivered materials shall closely match the color, texture and consistency of the samples.

1. Submit one gallon samples of all Fill Soil, Topsoil, .sand, light weight aggregate, compost, and soil additive products in this section. The number of samples shall be as required for each material.
   a. Samples should be labeled to include the location of the source of the material.
   b. Samples of all Fill Soil, Topsoil, sand, and compost shall be submitted at the same time as the particle size and physical analysis of that material.
   c. Topsoil shall be labeled as to the percentage of each component in the mix.
   d. Samples of all products, Fill Soil and Topsoil components shall be submitted 45 days before the installation of Fill Soil and Topsoil. Fill Soil and Topsoil shall be submitted no more than two weeks after the approval of the mix component.

D. Testing: Submit soil test analysis report for each sample of Fill Soil and Topsoil from an approved soil-testing laboratory.

1. For Fill Soil and Topsoil provide a particle size analysis (% dry weight) including the following gradient of mineral content:

USDA Designation	Size in mm.
Gravel	+2mm
Very Coarse Sand	1-2 mm
Coarse Sand	0.5 -1 mm
Medium Sand	0.25-0.5 mm
Fine Sand	0.1-0.25 mm
Very Fine Sand	0.05-0.1 mm
Silt	0.002-0.05 mm
Clay	minus 0.002 mm

Provide the USDA soil type designation for each soil tested.

2. For all Fill Soil and Topsoil provide a chemical analysis including the following:
   a. pH and Buffer pH
   b. Percent organic content by oven dried weight.
   c. Nutrient levels by parts per million including: nitrate, phosphorus, potassium magnesium, manganese, iron, zinc and calcium. Nutrient test shall include the testing laboratory recommendations for supplemental additions to the Fill Soil and Topsoil.
   d. Soluble salt by electrical conductivity of a 1:2 soil water sample measured in Milliohm per cm.
   e. Cation Exchange Capacity (CEC).

3. Provide a physical analysis of each Fill Soil and Topsoil to include the following test results:
   a. Water permeability with the sample compacted to 80% and 85% maximum

proctor density utilizing proctor test (ASTM D 698-91).

4. All testing will be at the expense of the Contractor. Hoerr Schaudt Landscape Architects may request additional Fill Soil and Topsoil water permeability tests on different mix component ratios in order to attain results that more closely meet the mix requirements.
5. All Soils to be tested at original location for approval and then tested a second time after installation. Installed material shall match properties of tested samples, lack of consistency could result in the rejection of soil.
6. Testing of Fill Soil and Topsoil shall be performed by:

Brookside Laboratories c/o Dirt-N-Turf Consulting, Inc.
David Marquardt,
42 Clark Street,
Hinckley, IL 60520.
Tel 630-251-1511
dave@dirt-n-turf.com

E. Submittal Summary

Item/Product	Tests./ Submittals
Sandy Clay Loam Topsoil	1 gallon sample from each source, samples shall represent the range of material to be provided. Separate samples from screened and unscreened topsoil stockpiles
	Particle size analysis see 1.3.D.1 for required tests
	Chemical analysis see 1.3.D.2 for required tests
Sandy Loam Fill Soil	1 gallon sample from each source, samples shall represent the range of material to be provided. Separate samples from screened and unscreened topsoil stockpiles
	Particle size analysis see 1.3.D.1 for required tests
	Chemical analysis see 1.3.D.2 for required tests
Coarse sand	1 gallon sample
	Manufacturers certificates of compliance showing: pH, particle size analysis, Fines Modulus Index
Mature Compost	1 gallon sample
	Manufacturers certificates of compliance showing: pH, particle size analysis, certificate of length of composting period, and certificate that the compost meets the requirements of the IEPA per IDOT Standards
	Manufacturer: Sun Grow Horticulture or approved equal
	Product: Metro-Mix 360 SUN-COIR or approved equal
Chemical Additives	Manufacturers Product Data

1.4 SEQUENCING AND SCHEDULING

A. General: Prior to the start of Work, prepare a detailed schedule of the work for coordination with other trades.

B. Schedule the installation of Fill Soil and Topsoil after the area is no longer required for use by other trades and work.

C. Schedule all utility installations prior to beginning work in this section.

1.5 QUALITY ASSURANCE

A. Contractor is solely responsible for quality control of the Work.

B. The installer shall be a firm having at least 5 years of successful experience of a scope similar to that required for the Work, including the preparation, mixing and installation of custom topsoils in urban locations.

C. Comply with applicable requirements of the laws, codes, ordinances and regulations of federal, State and municipal authorities having jurisdiction. Obtain necessary approvals from all such authorities.

D. Comply with all requirements for control of silt and sediment during soil installation work as indicated in the contract documents.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Weather: Do not mix, deliver or place or grade soils in frozen, wet, muddy or overly dry conditions.

B. Protect soil stock piles from rain and washing that can separate fines and coarse material. Cover stockpiles with plastic sheeting or fabric at the end of each workday.

C. Protect Topsoil stockpiles from contamination by chemicals, dust and debris that may be detrimental to plants or soil drainage.

D. Soil mixing must take place offsite by an experienced soil-blending supplier.

E. Deliver all fertilizers in original, unopened containers with original labels intact and legible, which state the guaranteed chemical analysis.

F. Bulk Material: Coordinate delivery and storage with Owner's Representative and confine materials to neat piles in areas acceptable to Owner's Representative.

1.7 SITE CONDITIONS

A. It is the responsibility of the Contractor to be aware of all surface and sub-surface conditions, and to report any circumstances that will negatively impact soil drainage. Do not proceed with work until unsatisfactory conditions have been corrected. Proceeding with work constitutes acceptance of existing or corrected conditions.

1.8 WORKING AROUND UTILITIES

A Carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging.

B Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned. Notification local authorities / utility companies before digging for utility locations. The Landscape Contractor is responsible for knowing the location and avoiding utilities.

PART 2 - PRODUCTS

2.1 SANDY CLAY LOAM TOPSOIL

A. Fertile, friable, sandy clay loam soil; less than 5% total volume of any combination of fill soil, refuse, roots larger than 1/2" in diameter, heavy or stiff clay, stones larger than 2 inch in diameter, noxious seeds, sticks, brush, litter, or other substances deleterious to plant growth; suitable for the germination of seeds and the support of vegetative growth. Topsoil shall not contain weed seeds in quantities that cause noticeable weed infestations in the final planting beds.

B. Topsoil shall contain the following components by percentage:

Component	Criteria
Silt	Remainder
Clay	20% to 35%
Sand	50% to 70%
pH	5 to 7.6
Organic Matter	5% to 7%

C. Topsoil shall be a harvested topsoil from agricultural fields or development sites. It shall be assumed that there are no available topsoil stockpiles on site. The organic content and particle size distribution shall be the result of natural soil formation.

D. Soil Amendments: The contractor shall make all soil amendments required by the soil test at his own cost.

E. Soil Texture: Sandy Clay Loam.

F. Topsoil shall NOT have been screened and shall retain soil peds or clods larger than 2 inches in diameter throughout the stockpile.

G. Provide a one gallon sample from each topsoil source with soil testing results. The sample shall be a mixture of the random samples taken around the source stockpile or field. The soil shall be delivered with soil peds intact that represent the size and quantity of expected peds in the soil.

2.2 SANDY LOAM FILL SOIL

A. Fertile, friable, sandy loam fill soil; less than 5% total volume of any combination of refuse, roots larger than 1" in diameter, heavy or stiff clay, stones larger than 2 inch in diameter, noxious seeds, sticks, brush, litter, or other substances deleterious to plant growth; suitable for the germination of seeds and the support of vegetative growth. Fill soil shall not contain weed seeds in quantities that cause noticeable weed infestations in the final planting beds.

B. Fill soil shall contain the following components by percentage:

Component	Criteria
Silt	Remainder
Clay	20% to 35%
Sand	65% to 80%
pH	5 to 7.6
Organic Matter	0% to 1%

C. Fill soil shall be a harvested soil from fields or development sites. The organic content and particle size distribution shall be the result of natural soil formation.

D. Soil Amendments: The contractor shall make all soil amendments required by the soil tests at his own cost.

E. Soil Texture: Sandy Loam.

F. Fill soil shall NOT have been screened and shall retain soil peds or clods larger than 2 inches in diameter throughout the stockpile.

G. Provide a one gallon sample from each soil source with soil testing results. The sample shall be a mixture of the random samples taken around the source stockpile or field. The soil shall be delivered with soil peds intact that represent the size and quantity of expected peds in the soil.

2.3 COARSE SAND

A. Coarse concrete sand, ASTM C-33 Fine Aggregate, with a Fines Modulus Index of 2.8 and 3.2.

1. Sands shall be clean, sharp, natural sands free of limestone, shale and slate particles. Sand PH shall be lower than 7.0

2. Provide the following particle size distribution:

Sieve	Percent Passing
3/8" (9.5mm)	100
No 4 (4.75mm)	95-100
No 8 (2.36mm)	80-100
No 16(1.18mm)	50-85
No30 (.60mm)	25-60
No50 (.30mm)	10-30
No100 (.15mm)	2-10

B Provide a one gallon sample with manufacturer's literature and material certification that the product meets the requirements.

2.4 MATURE COMPOST

A. Organic blended material composted for a minimum of 9 months and sufficiently to break down all woody fibers, seeds and leaf structures, free of toxic and non-organic matter. Source material shall be cattle manure blended with other organic material designed to produce compost high in fungal material. Organic Matter shall be commercially prepared compost and meet IDOT criteria for stable, mature compost intended for Planting. Soil amendment compost made from primarily green yard waste shall not be acceptable.

B. Product Parameters:

1. pH 6.0 - 8.5
2. Soluble Salt Concentration (electrical conductivity) Maximum 10 dS/m (mmhos/cm)
3. Moisture Content %, wet weight basis 30 – 60
4. Organic Matter Content %, dry weight basis 30 – 65
5. Particle Size % passing a selected mesh size, dry weight basis 98% pass through 3/4" screen or smaller
6. Stability Carbon Dioxide Evolution Rate mg CO2-C per g OM per day <8
7. Physical Contaminants (inerts) %, dry weight basis <1
8. Chemical Contaminants mg/kg (ppm) Meet or exceed US EPA Class A standard, 40CFR § 503.13, Tables 1 and 3 levels
9. Biological Contaminants Select Pathogens Fecal Coliform Bacteria, or Salmonella, Meet or exceed US EPA Class A standard, 40 CFR § 503.32(a) levels

C. Provide a one gallon sample with manufacturer's literature and IEPA registration which meets IDOT Standards.

2.5 CHEMICAL ADDITIVES

A. Chemical materials designed to increase soil fertility. All material shall be delivered to the site in unopened containers and stored in a dry enclosed space suitable for the material and meeting all environmental regulations. All products shall be freshly manufactured and dated for the season in which the products are to be used.

1. Fertilizer for planting shall be organic fertilizer. Fertilizer selections shall be based on the recommendations from the soil testing agency. Submit manufacturers' product literature for approval.
2. Mycorrhyzome Stimulant: Roots M-ROOTS with mycorrhizae 3-3-3m or approved equal. Supply specifications for an "approved equal" before Landscape Architect's approval. Stimulant shall be watered in at the root zone to promote root growth. Deciduous and evergreen mycorrhyzome products shall be used according to manufacturer's recommendations.

Source:
Lebanon Turf
1600 E Cumberland St
Lebanon, PA 17042

PART 3 – EXECUTION

3.1 SITE EXAMINATION

A. Examine the surface grades and soil conditions for any circumstances that might be detrimental to soil drainage, such as uneven sub grades and waterproofing that may hold

or pond water, deposits of construction-related waste or soil contamination, storage of material or equipment, soil compaction or poor drainage. Confirm that all utility work and installation of planter drainage has been completed and tested. Examine the grading, verify all elevations. Confirm that all other work in the area of Fill Soil and Topsoil installation is completed. Notify Hoerr Schaudt Landscape Architects in writing of any unsatisfactory conditions.

B. Using survey instruments, the Contractor shall verify that subgrade has been prepared according to specification with regard to compaction, grade tolerances and is free of debris prior to beginning work.

C. The Contractor shall be responsible for all construction surveying required for the proper location of all work covered hereunder.

3.2 COORDINATION WITH PROJECT WORK

A. The Contractor shall coordinate with all other work that may impact the completion of the work. Protect installed Fill Soil and Topsoil from compaction by other trades.

B. Assure that all sediment control required by the project documents is in place during the installation of Fill Soil and Topsoil. Provide additional sediment control to retain Fill Soil and Topsoil within the project limits as needed to keep sediment from migrating on to finished paving and wall surfaces.

C. Irrigation and site utility coordination: Site utility and electrical conduits, irrigation lines and heads encountered during the Fill Soil and Topsoil installation process shall be noted and flagged. Protect these lines from damage during the installation of Fill Soil and Topsoil.

1. Where feasible install site utility including site lighting and irrigation below the subgrade of the Fill Soil and Topsoil prior to the installation of the soils.

2. Assure that all conduits and risers are outside the limit of all tree and large shrub root balls.

3. When required to have utilities, electric or irrigation lines installed within the Fill Soil and Topsoil, coordinate with the subcontractors to avoid compacting the soil. All utility trenches shall be hand dug through the Fill Soil and Topsoil. Trenches shall be backfilled with the specified Fill Soil and Topsoil at the compaction levels specified.

2. When conflicts between any conduits and soil installation or plant installation are unavoidable, Utility, electrical and irrigation lines shall be traced to their nearest connection and their alignment relocated to avoid the conflict. The open end of the irrigation line shall be capped to prevent clogging. The site of a disconnected irrigation line shall be flagged after excavated soil has been backfilled.

3.3 GRADE AND ELEVATION CONTROL

A. Provide grade and elevation control during installation of Fill Soil and Topsoil. Utilize grade stakes, surveying equipments and other means and methods to assure that grades and contours conform to the grades indicated on the plans.

B. Maintain grade stakes until the grades have been viewed by Hoerr Schaudt Landscape Architects.

3.4 FILL SOIL AND TOPSOIL DESIGN

A. Prepare a minimum of (3) 1 gallon sample mixes for Fill Soil and Topsoil using soil taken from different areas of the approved topsoil *source*, to determine the ratio of mix components to be added to the Fill Soil and Topsoil. Submit samples for approval.

B. Prepare a minimum of (3) 1 gallon sample mixes for Fill Soil and Topsoil using soil taken from different areas of the *installed* topsoils. Mixes should be in accordance with approved samples. Lack of compatibility can result in rejection of soil mix.

C. This specification is based on the assumption that the soil products to be provided are natural and will vary in quality from location to location and within each soil source, and that mixing of soil will result in variety within the mix. The contractor is expected to provide samples that represent the range of product quality to be provided.

D. The contractor shall submit mix designs with test results for evaluation. Multiple rounds of testing and evaluations may be required before an approved Fill Soil and Topsoil can be determined. For each test mix, submit both representative samples of the material along with the test results to Hoerr Schaudt Landscape Architects.

E. Given the variability of the natural products in these soils, the contractor is advised to work with Hoerr Schaudt Landscape Architects when evaluating products and mix ratios. Significant amounts of time and soil testing cost can be saved if product specific issues and approaches to developing soil blending mixes are discussed prior to and during the testing process.

F. Schedule the Fill Soil and Topsoil testing phase such that all testing and mix design is completed a minimum of six weeks prior to the installation of the soils.

3.5 SITE PREPARATION

A. In areas not above structure, excavate to the proposed sub grade. Maintain all required angles of repose of the adjacent materials as shown on the drawings. Do not over excavate compacted sub grades of adjacent pavement or structures. Maintain a supporting 1:1 side slope of compacted subgrade material along the edges of all paving and structures with the bottom of the paving or structure above the elevation of the excavated planting area.

B. Remove all construction debris and material including any temporary construction roads.

C. Confirm that the sub grade is at the proper elevation and compacted as required. Except on slopes steeper than 33%, Sub grade elevations shall slope approximately parallel to the finished grade and/or toward the subsurface drain lines as shown on the drawings.

D. In areas of Fill Soil and Topsoil installation above existing compacted subgrade soil and with slopes steeper than 33%, step compacted subgrade in 12-18" high steps to reduce shear slippage. In these areas suspend the requirement for tilling or loosening of the subgrade material.

E. In areas of Fill Soil and Topsoil installation above structure, with slopes steeper than 33% and above foam fill, step foam fill blocks in 6" to 12" high steps to reduce shear slippage.

F. Do not proceed with the installation of Fill Soil and Topsoil until all utility work in the area has been installed.

G. Do not begin Fill Soil and Topsoil installation until all subsurface drainage, drain boards, filter cloth, irrigation main lines, lateral lines, and irrigation risers shown on the drawings are viewed and approved by Hoerr Schaudt Landscape Architects.

H. Protect adjacent walls, walks and utilities from damage or staining by the soil. Use 1/2" plywood and or plastic sheeting as directed to cover existing concrete, metal and masonry work and other items as directed during the progress of the work.

1. At the end of each working day, clean up any soil or dirt spilled on any paved surface.

2. Any damage to the paving or architectural work shall be repaired at the contractor's expense.

3.6 FILL SOIL INSTALLATION

A. Prior to installing any Sandy Loam Fill soil, Hoerr Schaudt Landscape Architects shall review and approve the condition of the existing sub grade and the installation of subsurface drainage material.

B. In soil areas within enclosed containers, assure that all required drain holes and scuppers are open and are clear of debris.

C. All equipment utilized to install fill soil shall be wide track machines rated with a ground pressure of 4 PSI or less. All grading and soil delivery equipment shall have buckets equipped with teeth to scarify any soil that becomes compacted.

D. Loosen the existing subgrade material prior to installing fill soil.

1. Scarify the existing subgrade to a depth of 6 inches.

2. Immediately install the fill soil. Protect the loosened area from traffic. DO NOT allow the loosened existing sub grade to become compacted.

3. In the event that the loosened area becomes overly compacted, loosen the area again prior to installing the fill soil.

E. Where travel over installed soil is unavoidable. Limit the paths of traffic to reduce the impact of compaction in the soil. Each time equipment passes over the installed soil it shall reverse out of the area along the same path with the teeth of the bucket dropped to

scarify the soil. Comply with the paragraph "Compaction Reduction" in the event that soil becomes over compacted.

F. The depths and grades shown on the drawings are the final grades after settlement and shrinkage of the organic material. The contractor shall install the fill soil at a higher level to anticipate this reduction of fill soil volume. A minimum settlement of approximately 10% of the soil depth is expected. All grade increases are assumed to be as measured to be prior to the addition of any surface compost till layer or mulch.

3.7 FILL SOIL COMPACTION

A. Compact the fill soil to the compaction rates indicated and using the approved methods.

1. Achieve a soil density of between 78 and 85% of maximum dry density standard proctor.
2. Fill soil compaction shall be tested at each lift using a cone penetrometer. The same penetrometer and moisture meter shall be used to test installed soil throughout the work.
3. Maintain at the site a cone penetrometer with pressure dial and a soil moisture meter on the site at all times to measure the compaction rates. Hoerr Schaudt Landscape Architects may utilize this equipment to verify compaction rates.

B. Maintain moisture conditions within the fill soil during installation to allow for satisfactory compaction. Suspend installation operations if the fill soil becomes overly wet. Apply water if the soil is overly dry. Do not place fill soil on wet or frozen sub grade.

C. Provide adequate equipment to achieve consistent and uniform compaction of the fill soil. Use the smallest equipment that can reasonably perform the task of spreading and compaction.

3.8 TOPSOIL INSTALLATION

A. Prior to installing any Topsoil, Hoerr Schaudt Landscape Architects shall approve the condition of the fill soil and the installation of subsurface drainage material.

B. In soil areas within enclosed containers, assure that all required drain holes and scuppers are open and are clear of debris.

C. All equipment utilized to install Topsoil shall be wide track machines rated with a ground pressure of 4 PSI or less. All grading and soil delivery equipment shall have buckets equipped with teeth to scarify any soil that becomes compacted.

D. Loosen the fill soil material prior to installing Topsoil.

1. Scarify the fill soil to a depth of 6 inches.
2. Immediately install the Topsoil. Protect the loosened area from traffic. DO NOT allow the loosened sub grade to become compacted beyond the specified

compaction rates.

3. In the event that the loosened area becomes overly compacted, loosen the area again prior to installing the Topsoil.

E. Phase work such that equipment to deliver or grade soil or deliver or install large trees does not have to operate over previously installed Topsoil. Where possible place large trees first and fill Topsoil around the root ball.

F. Where travel over installed Topsoil is unavoidable. Limit the paths of traffic to reduce the impact of compaction in the soil. Each time equipment passes over the installed soil it shall reverse out of the area along the same path with the teeth of the bucket dropped to scarify the soil. Comply with the paragraph "Compaction Reduction" in the event that soil becomes over compacted.

G. Install Mycorrhyzome Stimulant per manufactures specifications and instructions. Stimulant may be blended in with soil and also spread on top of surface after Topsoil is installed.

H. The depths and grades shown on the drawings are the final grades after settlement and shrinkage of the organic material. The contractor shall install the Topsoil at a higher level to anticipate this reduction of Topsoil volume. A minimum settlement of approximately 10% of the soil depth is expected for Soil Types A and B. Soil Type C, in lawn areas shall be installed 1" higher than the design grades. All grade increases are assumed to be as measured to be prior to the addition of any surface compost till layer or mulch.

3.9 TOPSOIL COMPACTION

D. Compact the Topsoil to the compaction rates indicated and using the methods approved for the soil mock up.

1. Achieve a soil density of between 78 and 85% of maximum dry density standard proctor.

2. Topsoil compaction shall be tested at each lift using a cone penetrometer. The same penetrometer and moisture meter shall be used to test installed soil throughout the work.

3. Maintain at the site a cone penetrometer with pressure dial and a soil moisture meter on the site at all times to measure the compaction rates. Hoerr Schaudt Landscape Architects may utilize this equipment to verify compaction rates.

E. Maintain moisture conditions within the Topsoil during installation to allow for satisfactory compaction. Suspend installation operations if the Topsoil becomes overly wet. Apply water if the soil is overly dry. Do not place Topsoil on wet or frozen sub grade.

F. Provide adequate equipment to achieve consistent and uniform compaction of the Topsoil. Use the smallest equipment that can reasonably perform the task of spreading and compaction.

3.10 COMPACTION REDUCTION

A. Any soil that becomes compacted to a density greater than the specified density shall be dug up and reinstalled.

B. Surface roto tilling shall not be considered adequate to reduce over compaction at levels 6" or greater below finished grade. This requirement includes compaction caused by other subcontractors after the Topsoil is installed and approved.

3.11 INSTALLATION OF CHEMICAL ADDITIVES

A. Following the installation of each soil type, apply chemical additives as recommended by the soil testing agency, and appropriate to the soil type and specific plants to be installed.

B. Types, application rates and methods of application shall be approved by Hoerr Schaudt Landscape Architects, prior to any applications.

C. Approximately one month after any application of chemical additives, re-sample the soil and apply additional applications if the soil tests indicate further chemical applications would be beneficial. Make sufficient test to analyze each soil type and each plant association within that soil type.

3.12 FINE GRADING

A. Hoerr Schaudt Landscape Architects shall view all rough grading prior to the installation of Organic Matter, fine grading, planting, and mulching.

B. Grade the finish surface of all planted areas to meet the grades shown on the drawings after the twelve-month settling period. Allow the finished grades to remain higher than the grades on the grading plan, as defined in paragraphs Fill Soil and Topsoil Installation, to anticipate settlement over the first year.

B. Utilize equipment with rakes or buckets with teeth for fine grading to keep surface rough. Do not use the bottom of a loader bucket such that the finished grade is smooth and slightly compressed.

C. Adjust the finish grades to meet field conditions as directed.

D. Provide for positive drainage from all areas toward the existing inlets, drainage structures and or the edges of planting beds. Adjust grades as directed to reflect actual constructed field conditions of paving, wall and inlet elevations. Notify Hoerr Schaudt Landscape Architects in the event that conditions make it impossible to achieve positive drainage.

E. Provide smooth transitions between slopes of different gradients and direction. Modify the grade so that the finish grade is flush with all paving surfaces or as directed by the drawings.

F. Fill all dips and remove any bumps in the overall plane of the slope.

1. The tolerance for dips and bumps in shrub and ground cover planting areas shall be a 1" deviation from the plane in 10'.

G. Restore all grades after the installation of plants.

3.13 INSTALLATION OF MATURE COMPOST

A. After the specified Topsoil is installed in planting bed areas with slopes less than 33%, and just prior to the installation of tree, shrub or groundcover plantings, spread 4" of Mature Compost over the area designated on the plans and details and roto-till into the top 4" of the Topsoil This step will raise grades slightly above the grades required in paragraph Fine Grading above.

3.14 CLEAN-UP

A. During installation, keep pavements clean and work area in an orderly condition.

B. Keep the site free of garbage at all times. Immediately dispose of wrappings or waste materials associated with products necessary for the completion of the work.

C. All garbage shall be kept in a central collection container. Do not bury garbage in back-fill.

D. Once installation is complete, remove any excess soil from pavements or other site structures.

3.15 PROTECTION

A. The Contractor shall protect installed Fill Soil and Topsoil from damage due to other soil installation, planting operations, operations by other Contractors or trespassers including contamination and over compaction of installed soils. Maintain protection during installation until acceptance. Utilize fencing and matting as required or directed. Treat, repair or replace damaged soil immediately.

B. Loosen compacted Topsoil and replace Topsoil that has become contaminated as determined by Hoerr Schaudt Landscape Architects. Topsoil shall be loosened or replaced at no expense to the Owner.

3.16 REPAIR OF SETTLED TOPSOIL

A. At the end twelve months after the date of substantial completion of the Fill Soil and Topsoil installation work, inspect the site and restore any areas where the grades have settled beyond the elevations shown on the drawings by an amount greater than 5% of the soil depth.

1. In shrub planting areas where the settlement is 3" or less, remove the mulch, top dress the area with the specified Topsoil and re-mulch.

2. In all ground cover areas and shrub planting areas where the settlement is greater than 3" remove the mulch and plants, add the specified Topsoil, re-plant and re-mulch.

PART 4 – BASIS OF MEASUREMENT AND PAYMENT

A. METHOD OF MEASUREMENT

This work will be measured for payment as follows.

a. Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a).

b. Measured Quantities. Material excavated in excess of that required for the contract will not be measured for payment.

c. Fill Soil and Topsoil excavation and placement will be measured in cubic yards. The volume will be computed by the method of average end areas. In no case will the width or depth used for the computations be greater than the dimensions shown on the plans unless such changes have been approved in writing by the Landscape Architect. No shrinkage factor will be allowed. Soil excavation shall include the excavating, hauling, and stockpiling of the material in the locations approved by the Landscape Architect. If the Contractor requests and the Landscape Architect approves additional areas within the limits of the right-of-way for topsoil excavation other than shown on the plans, these added quantities will be deducted from the item of borrow excavation, furnished excavation, or earth excavation.

B. BASIS OF PAYMENT

This work will be paid for at the contract unit price per cubic yard for LANDSCAPE FILL SOIL or TOPSOIL FURNISH AND PLACE, SPECIAL.

END OF SECTION

XX006677 TREE WELL

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and the Specification Sections, apply to this Section.

SUMMARY

Section Includes:

Furnishing and installing Structural Cell system, geotextile, geogrids, sub base material, backfill, drainage system, root barrier, mulch and the installation of topsoil.

DEFINITIONS

Aggregate Sub Base (below Cell frame): Aggregate material between the bottom of the Structural Cell frame and the compacted subgrade below, designed to distribute loads from the frame to the subgrade.

Aggregate Base Course (above Cell deck): Aggregate material between the paving and the top of the Structural Cell deck below designed to distribute loads across the top of the deck.

Aggregate Setting Bed – For Pavers (above Cell deck): Aggregate material between the aggregate base course and unit surface pavers, designed to act as a setting for the pavers.

Backfill: The earth used to replace or the act of replacing earth in an excavation beside the Structural Cell frames to the excavation extents.

Finish Grade: Elevation of finished surface of topsoil or paving.

Geogrid: Net-shaped synthetic polymer-coated fibers that provide a stabilizing force within soil structure as the fill interlocks with the grid.

Geotextile: A geosynthetic fabric, applied to either the soil surface or between materials, providing filtration, separation, or stabilization properties.

Topsoil: Soil as defined in Section "Topsoil Preparation" intended to fill the frames and other planting spaces.

Root Barrier: Plastic root diversion device.

Root Package: The earthen package containing the root system of the tree as shipped from the nursery.

Tree Wells: Plastic structural cellular system with post, beams and decks designed to be filled with topsoil for tree rooting and support vehicle loaded pavements. The soil within the cells may also be used as part of rainwater filtering, retention and detention systems.

Subgrade: Surface or elevation of fill soil remaining after completing excavation, or top surface of a fill or backfill.

Strongback: Modified Tree Well (structural cells) frame designed to be attached to top of Tree Well (structural cells) for stability while installing topsoil and backfill.

Fill soil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

Tree: A perennial woody plant with one or several trunks and a distinct crown and intended to become large enough to shade people and or vehicles.

SUBMITTALS

Upon forty-five (45) days prior to start of installation of items in this section, the Contractor shall provide submittals required in this section to the project landscape architect for review and approval.

Product Data: For each type of product, submit manufactures product literature with technical data sufficient to demonstrate that the product meets these specifications.

Samples for Verification: For each product where noted in the specification, submit samples as described.

Soil Installation Mock Up and Compaction Evaluation:

Prior to the installation of Tree Wells (structural cells), construct a mock up of the complete installation at the site. The installation of the mock up shall be in the presence of the project landscape architect.

The mock up shall be a minimum of 100 square feet in area and include the complete Tree Wells (structural cells) system installation with sub base compaction, drainage installation, Base course aggregate and geotextile as required, geogrids, backfill, topsoil with compaction, decks, and top geotextile.

The mock up area may remain as part of the installed work at the end of the project provided that it remains in good condition and meets all the conditions of the specifications.

Compaction testing results: Submit results of all compaction testing required by the specifications including the bulk density test of the mock up and installed soil, and the compaction testing log of penetrometer and moisture meter readings to the Engineer for approval

Qualification Data: Submit documentation of the qualifications of the Tree Wells (structural

cells) installer sufficient to demonstrate that the installer meets the requirements of paragraph "Quality Assurance".

Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:

Manufacturer's certified analysis for standard products.

Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

Tree Wells (structural cells) manufacturer's letter of review and approval of the project, plans, details and specifications for compliance with product installation requirements.

SEQUENCING AND SCHEDULING

General: Prior to the start of Work, prepare a detailed schedule of the work for coordination with other trades.

Schedule all utility installations prior to beginning work in this section.

Where possible, schedule the installation of Tree Wells (structural cells) after the area is no longer required for use by other trades and work. Protect installed Tree Wells (structural cells) from damage in the event that work must occur over or adjacent to the completed Tree Wells (structural cells).

QUALITY ASSURANCE

Installer Qualifications: Tree Wells (structural cells) and related products shall be installed by a qualified installer whose work has resulted in successful installation of topsoil and planter drainage systems, underground piping, chambers and vault structures.

Submit list of completed projects of similar scope and scale to the Owner, demonstrating capabilities and experience.

The installer and the field supervisor shall have a minimum of five years successful experience with construction of similar scope in dense urban areas.

Installer's Field Supervision: Installer is required to maintain an experienced full-time supervisor on Project site when work is in progress. This person shall be identified during the Pre-installation Conference, with appropriate contact information provided, as necessary. The same supervisor shall be utilized throughout the Project, unless a substitution is submitted to and approved in writing by the Engineer.

LAYOUT AND ELEVATION CONTROL

Provide layout and elevation control during installation of Tree Wells (structural cells). Utilize

grade stakes, benchmarks, surveying equipment and other means and methods to assure that layout and elevations conform to the layout and elevations indicated on the plans.

PERMITS AND CODE COMPLIANCE

Comply with applicable requirements of the laws, codes, ordinances and regulations of Federal, State and Municipal authorities having jurisdiction. Obtain necessary permits/ approvals from all such authorities.

DELIVERY, STORAGE, AND HANDLING

Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws, if applicable. Protect materials from deterioration during delivery and while on the project site.

Bulk Materials: Do not deliver or place backfill, soils and soil amendments in frozen, wet, or muddy conditions.

Do not dump or store bulk materials near structures, utilities, sidewalks, pavements, and other facilities, or on existing trees, turf areas or plants.

Provide protection including tarps, plastic and or matting between all bulk materials and any finished surfaces sufficient to protect the finish material.

Provide erosion-control measures to prevent erosion or displacement of bulk materials and discharge of soil-bearing water runoff or airborne dust to adjacent properties, water conveyance systems, and walkways. Provide additional sediment control to retain excavated material, backfill, soil amendments and planting mix within the project limits as needed.

Tree Wells (structural cells): Protect Tree Wells (structural cells). from damage during delivery, storage and handling.

Store under tarp to protect from sunlight when time from delivery to installation exceeds one week. Storage should occur on smooth surfaces, free from dirt, mud and debris.

Handling is to be performed with equipment appropriate to the size (height) of Cells and site conditions, and may include, hand, handcart, forklifts, extension lifts, small cranes, etc., with care given to minimize damage to Tree Wells (structural cells). frames, decks and adjacent Tree Wells. Backhoes, front-end loaders and skid steers are considered inappropriate for Tree Wells (structural cells) transport and placement.

PROJECT CONDITIONS

Verification of Existing Conditions and Protection of New or Existing Improvements: Before proceeding with work in this section, the Installer shall carefully check and verify all dimensions,

quantities, and grade elevations, and inform the project landscape architect immediately of any discrepancies.

Carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging. Verify the location of all aboveground and underground utility lines, infrastructure, other improvements, and existing trees, shrubs, and plants to remain including their root system, and take proper precautions as necessary to avoid damage to such improvements and plants.

In the event of conflict between existing and new improvements notify the project landscape architect in writing and obtain written confirmation of any changes to the work prior to proceeding.

When new or previously existing utility lines are encountered during the course of excavation, notify the project landscape architect in writing and make recommendations as to remedial action. Proceed with work in that area only upon approval of appropriate remedial action. Coordinate all work with the appropriate utility contractors, utility company or responsible public works agency.

Weather Limitations: Do not proceed with work when subgrades, soils and topsoils are in a wet, muddy or frozen condition.

Protect partially completed Tree Wells (structural cells) installation against damage from other construction traffic when work is in progress, and following completion with highly visible construction tape, fencing, or other means until construction traffic over the completed Tree Wells (structural cells) installation; only allowing loads less than the design loads.

PROTECTION

Protect open excavations and partially completed Tree Wells (structural cells) installation against damage from other construction traffic when work is in progress, and following completion with highly visible construction tape, fencing, or other means until construction is complete.

WARRANTY

Tree Wells (structural cells) manufacturer's product warranty shall apply. Submit manufacturer's product warranty.

Warranty for other products and installation of Tree Wells (structural cells) in this section shall be as described herein.

PROJECT WORK

Coordinate installation with all other work that may impact the completion of the work.

PRECONSTRUCTION MEETING

Prior to the start of the installation of Tree Wells (structural cells), meet at the site with the landscape architect, general contractor and the Tree Wells (structural cells) installer to review installation layout, procedures, means and methods.

PRODUCTS

TREE WELLS (STRUCTURAL CELLS)

Polyethylene and fiberglass structures including frames and decks designed to support sidewalk loads and designed to be filled with soil for the purpose of growing tree roots.

Tree Well (structural cells) Frames: 400mm x 600mm x 1200mm (16 inches x 24 inches x 48 inches).

Tree Wells (structural cells) Deck: 5cm x 600mm x 1200mm (2 inches x 24 inches x 48 inches). Deck to include manufactured installed galvanized steel tubes.

Tree Wells (structural cells) Strongback: 400mm x 600mm x 150mm (24 inches x 48 inches x 6 inches) modified Tree Wells (structural cells) Frame units designed to stiffen and align the frames as topsoil and backfill material is placed. Strongbacks are to be removed prior to placing decks. They are to be reused as the work progresses.

Tree Wells (structural cells) Deck Screws: Manufacturer's supplied stainless steel screws to attach decks to frames.

Manufacturer: Deep Root Partners L.P. (Deep Root) 530 Washington Street, San Francisco, CA 94111. 415-781-9700, Fax 415 437 9744. www.deeproot.com, or approved equal.

ANCHORING SPIKES

10" (250mm) long X 19/64" (8mm) diameter, spiral, galvanized timber spikes. Utilize 4 nails in each frame on the first layer of Tree Wells (structural cells) to anchor the frames to the aggregate subbase.

SOLID AND PERFORATED DRAIN LINES

PVC double wall perforated pipe. Pipe; manufactured from virgin, low filler cell class PVC resin (12454 per ASTM D1784). Pipe shall be Contech A-2000 as manufactured by Contech construction Products, Inc, Chicago IL phone 630 573 1110, www.contech-cpi.com., or approved equal.

Perforated pipe shall have slots on the bottom quadrant of the pipe of 1-1/16" long by .031" wide at .413 on center.

All fittings, "T", "Y" end caps, and splices shall be compatible fittings by the same manufacturer, Size – 4" diameter.

Pipe and fitting joints shall be glued using glue and techniques recommended by the pipe manufacturer.

INSPECTION RISER AND CAP

Inspection riser shall consist of a rigid, schedule 40 non-perforated PVC pipe, 4 inches in diameter. Cut slots in the bottom to allow water access for inspection risers that extend to the sub base aggregate.

Cap shall be PVC solid threaded cleanout or removable inlet grate designed to fit standard PVC schedule 40 pipe-fittings.

GEOGRID

Miragrid 2XT as manufactured by Ten Cate Nicolon, Norcross, GA, or approved equal, www.tcmirafi.com

GEOTEXTILE

Shall be one of the following geofabrics:

When warranties are required, verify with Owner's counsel that special warranties stated in this article are not less than remedies available to Owner under prevailing local laws.

Non woven polypropylene fabric with the following properties:

Grab tensile strength	370 lb.
Grab tensile elongation	50%
Mullen burst strength	380 psi
Puncture strength	130 lb.
Apparent opening size	US sieve 80 (0.180 mm)
Water flow rate	95 gpm/SF

Geotextile shall be delivered in 12 feet (3600mm) wide rolls min.

Geotextile shall be non woven polypropylene geotextile, Mirafi 180 N as manufactured by Ten Cate Nicolon, Norcross, GA, or approved equal, www.tcmirafi.com

AGGREGATE SUB BASE (BELOW CELL FRAME)

Aggregate meeting the requirements of ASTM D1241-07, Type 1, Gradation B, Standard Specification for Materials for Soil-Aggregate Sub base, Base, and Surface Courses (IDOT CA 6).

AGGREGATE BASE COURSE (ABOVE CELL DECK)

Aggregate meeting the requirements of ASTM D 448, No. 8, Standard Classification for Sizes of Aggregate for Road and Bridge Construction (IDOT CA 6).

AGGREGATE BASE COURSE AND SETTING BED FOR UNIT PAVERS (ABOVE CELL DECK)

Aggregate Base Course. Aggregate meeting the requirements for ASTM D 448, No. 57, Standard Classification for Sizes of Aggregate for Road and Bridge Construction (IDOT CA 6).

Aggregate Setting Bed. Aggregate meeting the requirements of ASTM D 448, No. 8, Standard Classification of Sizes of Aggregate for Road and Bridge Construction (IDOT CA 16).

BACKFILL MATERIAL (ADJACENT TO TREE WELLS)

Clean, compactable, coarse grained fill soil meeting the requirements of the Unified Soil Classification system for soil type GW, GP, GC with less than 30% fines, SW, and SC with less than 30% fines. Backfill material shall be free of organic material, trash and other debris, and shall be free of toxic material injurious to plant growth.

TOPSOIL (See Specification Section – Topsoil Furnish and Place, Special)

MULCH

Mulch shall consist of raw wood material from either hard or soft timber and shall be a product of mechanical chipper, hammermill, or tub grinder. The material shall be substantially free of mold, dirt, sawdust, and foreign material and shall not be in and advanced state of decomposition. The material shall not contain chipped up manufactured boards or chemically treated wood, including but not limited to wafer board, particleboard, and chromated copper arsenate (CCA) or penta treated wood. The material, when air-dried, shall all pass a 4 inch (100mm) screen and not more than 20 percent by mass of the material shall pass a 0.1 inch (2.36mm) sieve. Unattached bark or green leaf composition, either singly or combined, shall not exceed 20 percent each by mass.

ROOT BARRIER

Root Barrier shall be DeepRoot; Tree Root Barriers; UB 18-2, manufactured by DeepRoot Partners, L.P. (DeepRoot); 530 Washington Street, San Francisco, CA 94111; 415.781.9700; 800.458.7668; fax 415.781.0191; www.deeproot.com., or approved equal

Material: 0.080" wall thickness, nominal, injection molded 50% post-consumer recycled polypropylene panels with UV inhibitors.

Integral molded 0.080" thickness by 2" deep vertical root directing ribs spaced at 6" O.C.

7/16" wide integral molded 0.080" thickness double top edge with stiffening ribs; bottom

edge attached to vertical root deflecting ribs.

Integral molded 0.080" thickness by 2" long by 3/8" wide horizontal anti-lift ground lock tabs; minimum nine per panel.

Integrated zipper joining system for panel connection to adjacent panel.

Size (each panel): 24" wide by 18" deep.

Color: Black.

EXECUTION

LAYOUT APPROVAL

Prior to the start of work, layout and stake the limits of excavation and horizontal and vertical control points sufficient to install the Tree Wells (structural cells) and required drainage features in the correct locations.

EXCAVATION

Excavate to the depths and shapes indicated on the drawings. Base of excavation shall be smooth soil, level and free of lumps or debris.

Do not over-excavate existing soil beside or under the limits of excavation required for the installation. If soil is over-excavated, install compactable fill material in lifts not more than 8 inches (200mm) deep and compact to the required density.

Confirm that the depth of the excavation is accurate to accommodate the depths and thickness of materials required throughout the extent of the excavation.

Confirm that the width and length of the excavation is a minimum of 6 inches (150mm), in all directions, beyond the edges of the Tree Wells (structural cells).

SUB GRADE COMPACTION

Check compaction of the subgrade below the Tree Wells (structural cells) and confirm that the subgrade soil is compacted to a minimum of 95% of maximum dry density at optimum moisture content in accordance with ASTM D 698 Standard Proctor Method.

Proof compact the subgrade with a minimum of the three passes of a suitable vibrating compacting machine or apply other compaction forces as needed to achieve the required subgrade compaction rate.

Apply additional compaction forces at optimum water levels

INSTALLATION OF GEOTEXTILE OVER SUBGRADE

Where indicated on the drawings, install geotextile over the compacted subgrade material.

Install the geotextile with a minimum joint overlap of 18 inches (450mm) between sections of material.

INSTALLATION OF SOLID AND PERFORATED DRAIN LINES

Layout of the location of all drain lines. Adjust the alignments to conform to the final locations of sleeves and risers. Do not locate drain lines within6 inches (150mm) of the edge of any Tree Well (structural cells) post.

Provide horizontal field engineering at all times when drain lines are being installed to assure that the slope on all drain lines is positive toward its intended outfall and also remains at the correct depth as shown on the drawings.

Excavate a trench a minimum of 12 inches (300mm) wide to a depth required to provide positive drainage from the high points of the system to the outfall or connection point to storm sewer. Eliminate dips or rises that will trap water. Minimum slope shall be 1%.

Install the perforated drain lines as indicated on the drawing. All connections and splices shall use the manufacturer's standard splice and fitting connections. Joints shall be secure. Place perforated pipe with drain slots on the bottom side of the pipe.

INSTALLATION OF INSPECTION RISERS

Install 4" solid PVC inspection risers to grade.

Install manufacturer's PVC solid "T's," elbows, and reducers. Use the proper sized "T's" and reducers

Extend risers into sub base aggregate and or make connections to drain lines where indicated on the drawings.

Where inspection risers are indicated to be placed on top of the Tree Well (structural cells) Deck, assemble riser and fittings to dimensions requires such that the rim of the riser is flush with the paving. Set the rim top with a slope consistent with the slope of the pavement.

Adjust the location of the riser such that the center of the riser falls along the centerline of one of the ribbed sots in the deck. Cut the deck geotextile with an X cut and insert the riser through the geotextile.

Make a geotextile collar secured to the riser with zip ties that overlap the surrounding geotextile a minimum of 12 inches. Secure in place with tape.

Brace all risers while backfill and paving is being installed to secure its location and elevation.

Install cleanout caps on top of each riser flush to grade.

INSTALLATION OF AGGREGATE SUB BASE BELOW TREE WELL FRAME

Install aggregate sub base to the depths indicated on the drawings, under the first layer of Tree Well (structural cells) frames.

Compact aggregate sub base layer to a minimum of 95% of maximum dry density at optimum moisture content in accordance with ASTM D 698 Standard Proctor Method.

Compact the subgrade with a minimum of three passes of a suitable vibrating compacting machine or apply other compaction forces as needed to achieve the required subgrade compaction rate.

Grade surface in a plane parallel to the grades of the paving above.

The tolerance for dips and bumps in the aggregate under Tree Wells (structural cells) shall be a 3/8 inch (9mm) deviation from the plane in 10 feet (3m) and 1/8 inch (3mm) in 4 feet (1200mm).

The grade and elevations of the base under the Tree Wells (structural cells) shall be approved by the project landscape architect prior to proceeding with the installation of the Tree Wells (structural cells).

INSTALLATION OF TREE WELLS, TOPSOIL, GEOGRID AND BACKFILL

Identify the outline layout of the structure and the edges of paving around tree planting areas on the subgrade, using spray paint or chalk line. The layout shall be calculated to include shifts in layout locations due to depth and the slope of the Tree Wells (structural cells).

Lay out the first layer of Tree Wells (structural cells) frames on the sub base. Verify that the layout is consistent with the required locations and dimensions of paving edges to be constructed over the Tree Wells (structural cells).

Check each Tree Well (structural cells) frame unit for damage prior to placing in the excavation. Any cracked or chipped unit shall be rejected.

Place frames no less than 1 inch (25mm) and no more than 3 inches (75mm) apart.

Assure that each frame sits solidly on the surface of the sub base. Frames shall not rock or bend over any stone or other obstruction protruding above the surface of the sub base material. Frames shall not bend into dips in the sub base material. The maximum tolerance for deviations in the plane of the sub base material under the bottom of the horizontal bars of each Tree Well (structural cells) frame shall be 1/4 inch (6mm) in 4 feet (1200mm). Adjust sub base material including larger pieces of aggregate under each frame to provide a solid base of support.

Anchor each Tree Well (structural cells) into sub base with four-10 inch (250mm) spikes, driven

through the molded holes in the Cell frame base. The purpose of the anchoring system is to maintain cell spacing and layout during the installation of topsoil and backfill.

For applications where cells are installed over waterproofed structures, develop a spacing system. Do not use anchoring nails that will come within 6" or less of any waterproofing material. Submit spacing system procedure for approval by the waterproofing provider.

Install the second layer of Tree Well (structural cells) frames on top of the first layer. Comply with manufacturer's requirements to correctly register and connect the Cell frames together.

Register each frame on top of the lower frame post. Rotate each frame registration arrow in the opposite direction from the frame below to assure that connector tabs firmly connect. Each frame shall be solidly seated on the one below.

Build layers as stacks of frames set one directly over the other. Do not set any frame half on one Cell frame below and half on an adjacent frame.

Install Strongbacks on top of the Tree Wells (structural cells) frames prior to installing topsoil and backfill.

Strongbacks are required only during the installation and compaction of the topsoil and backfill.

Strongbacks should be moved as the work progresses across the installation.

Stromgbacks shall be removed prior to the installation of Tree Well (structural cells) decks.

Install topsoil, geogrids curtain and backfill as indicated on the drawings. The process of installation requires that these three materials be installed and compacted together in several alternating operations to achieve correct compaction relationships within the system.

Where required, place the geogrid curtain along the outside of the limit of the Tree Well (structural cells) frames.

Geogrid curtails are required between the edge of the Tree Wells (structural cells) and any soils to be compacted to support paving beyond the area of Tree Wells (structural cells). Do not place geogrid curtains between the edge of the cells and any planting area adjacent to the cells.

Pre-cut the geogrid a minimum for 6 inches (150mm) minimum beneath backfill, and 12 inches (300mm) minimum overlapping top of Tree Well (structural cells) stack.

Where cell layout causes a change direction in the plan of the geogrid, slice the top and bottom flaps of the material so that it lies flat on the top of the cell deck and aggregate base course along both planes.

Provide a minimum of 300mm (12 inch) overlaps between different sheets of geogrid.

Place the geogrid in the space between the Tree Well (structural cells) frames and the sides of the excavation. Attach the geogrid to the Tree Well (structural cells) frames using 3/16 inch x 12-inch (5x300mm) zip ties. Attach with a minimum of two zip ties at every cell.

Install no more than two layers of Tree Well (structural cells) frames before beginning to install topsoil and backfill. Compact the topsoil within the Tree Well (structural cells) frames and the backfill material outside the frames in alternating lifts until the desired elevations and density is achieved in both soils.

Install and compact backfill material in the space between the Tree Wells (structural cells) and the sides of the excavation in lifts that do not exceed 8 inches (200mm).

Compact backfill to 95% of maximum dry density using a powered mechanical compactor. Use a pneumatic compacting tool for spaces less than 12 inches (300mm) wide and a 12 inch wide jumping jack compactor or larger equipment in wider spaces.

Maintain the geogrid curtain between the Tree Well (structural cells) frames and the backfill material.

Install backfill in alternating lifts with the topsoil inside the Tree Wells (structural cells).

Fill the first layer or layers of frames with topsoil as specified in the Section "Topsoil Furnish and Place, Special". Install in lifts that do not exceed 8 inches (200mm). Lightly compact the soil inside the frames at each lift to remove air pockets and settle the soil within the frames.

Do not compact greater than 85% of maximum dry density. Check the soil compaction with a penetrometer or densiometer to achieve similar compaction levels provided in the mock up.

If the topsoil becomes overly compacted, remove the soil and reinstall. Use hand tools or other equipment that does not damage the Tree Well (structural cells) frames.

Do not walk directly on horizontal beams of the frames.

Work soil under the horizontal frame bars of the second level of Cell frames and between columns eliminating air pockets and voids. Fill each frame such that there is a minimum of 10 inches (250mm) of soil over the top of horizontal frame bars before beginning compaction.

The top 1-2 inches (25-50 mm) of each frame post should remain exposed above the soil to allow the placement of the next frame or deck

After the first two layers of Tree Well (structural cells) frames have been installed, filled with topsoil and backfilled, proceed to install the third layer, if required, of Tree Well (structural cells) frames. Comply with manufacturer's requirements to correctly register and connect the Cell frames together.

Remove the strongbacks. Sweep any soil from tops before adding the next layer of frames.

Register each frame on top of the lower frame post. Rotate each frame registration arrow in the opposite direction from the frame below to assure that connector tabs firmly connect. Each frame shall be solidly seated on the one below.

Build layers as stacks of frames set one directly over the other. Do not set any frame half on one Cell frame below and half on an adjacent frame.

Install Strongbacks on top of the third layer of Tree Wells (structural cells).

Continue to install and compact the topsoil within the Tree Well (structural cells) frames and the backfill material outside the frames in alternating lifts until the desired elevations and density is achieved in both soils.

When using mulch, add a final layer of topsoil as required to bring the topsoil level to not more than 3 inches (75mm) below the bottom of the Tree Well (structural cells) Deck when installed. When using air space rather than compost, the topsoil shall be brought to level not more than 1 inch (25mm) below the bottom of the Tree Well (structural cells) Deck when installed.

Obtain final approval by the project landscape architect of soil installation prior to installation of the Tree Well (structural cells) deck.

Remove strongbacks after topsoil and backfill has been compacted to the top of the entire set of Tree Wells (structural cells).

Install 3 inches (75mm) of mulch, or leave 1-inch (25mm) air space, below Tree Well (structural cells) Deck as indicated on the drawings.

TREE WELL DECK INSTALLATION

Install the Tree Well (structural cells) Decks over the top of each frame stack. Clean dirt from the tops of the Tree Well (structural cells) frame columns. Register the deck and make connections as recommended by the manufacturer to secure the deck to the top of the Tree Well (structural cells) Frame. Secure each deck at the four corners with screw fasteners as recommended by the manufacturer. Assure that each deck is seated firmly on the frame top with all connectors attached.

Install and compact remaining backfill material such that the soil outside the limits of the Tree Well (structural cells) is flush with the top of the installed deck.

INSTALLATION OF GEOTEXTILE, GEOGRID, INSPECTION RISER AND AGGREGATE OVER THE DECK

Overlap geogrid over the top of the Tree Well (structural cells) Decks, with minimum of 12inches

(300mm) overlap.

Place geotextile and where indicated on the drawings, extending beyond the outside edge of the excavation by at least 18 inches (450mm). Any joints must be overlapped by a minimum of 18 inches (450 mm).

Cut geotextile a minimum of 20 percent larger than the size of the deck area to be covered to accommodate for required conforming of the geotextile and stone to the deck contours.

Install 4-inch (100mm) diameter inspection risers above geotextile.

Install the paving aggregate base course (including aggregate setting bed if installing unit pavers) over the geotextile immediately after completing the installation of the fabrics and inspection risers. Work the aggregate from one side of the deck to the other to assure that the fabric and aggregate conforms to the cell deck contours. Do not apply aggregate in several positions at the same time.

Load the aggregate from equipment that is outside the limits of the excavated area. Use small, low impact material mover such as a concrete buggy or Georgia Buggy to move aggregate over the cells. Work over material already in place. Never allow any motorized equipment of any size to operate directly on the Tree Well (structural cells) Deck.

For large or confined areas, where aggregate cannot easily be placed from the edges of the excavated area, obtain approval for the installation procedure and types of equipment to be used in the installation from the Tree Well (structural cells) manufacturer.

Compact aggregate base course(s) in lifts not to exceed 6" in depth, to 95% of maximum dry density. Utilize a roller or plate compactor with a maximum weight of 1000 pounds. Make sufficient passes with the compacting equipment to attain the required compaction.

INSTALLATION OF PAVING ABOVE THE TREE WELL SYSTEM

Place sufficient paving material over Tree Wells(structural cells) system as specified herein.

Take care when placing backfill on top of Tree Well (structural cells) system not to damage the system components.

INSTALLATION OF ROOT BARRIERS

Install root barrier in accord with manufacturer's review installation instructions.

Install with vertical root directing ribs facing inwards towards trees or plants.

Connect panels together as required with manufacturer's standard joining system.

INSTALLATION OF TOPSOIL AND MULCH WITHIN THE TREE PLANTING AREA

Prior to planting trees, install additional topsoil, to the depths indicated, within the tree opening adjacent to paving supported by Tree Wells (structural cells).

Remove all rubble, debris, dust and silt from the top of the topsoil that may have accumulated after the initial installation of the topsoils within the Tree Wells (structural cells).

Assure that the topsoil under the tree root ball is compacted to approximately 85-90% to prevent settlement of the root ball.

The topsoil within the tree opening shall be the same soil as in the adjacent Tree Wells (structural cells).

Cover the topsoil finished grade with 2 inches (50mm) of mulch.

REPAIR OF CUT GEOTEXTILE

In the event that any geotextile over subgrades of the Tree Well (structural cells) decks must be cut during or after installation, repair the seam with a second piece of geotextile that overlaps the edges of the cut by a minimum of 12-inches in all directions prior to adding aggregate materials.

PROTECTION

Ensure that all construction traffic is kept away from the limits of the Tree Wells (structural cells) until the final surface materials are in place. No vehicles shall drive directly on the Tree Well (structural cells) deck or the aggregate base course.

Provide fencing and other barriers to keep vehicles from entering into the area with Tree Well (structural cells) supported pavement.

Maintain a minimum of 100mm (4 inches) of aggregate sub base over the geotextile material during construction

When vehicle must cross Tree Wells (structural cells) that does not have final paving surfaces installed, use construction mats designed to distribute vehicle loads to levels that would be expected at the deck surface once final paving has been installed. Use only low impact track vehicles with a maximum surface pressure under the vehicle of 4 pounds per square inch, on top of the mats over Tree Wells (structural cells) prior to the installation of final paving.

CLEAN UP

Perform cleanup during the installation of work and upon completion of the work. Maintain the site free of soil and sediment, free of trash and debris. Remove from site all excess soil materials, debris, and equipment. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

MEASUREMENT AND PAYMENT

This work will be measured and paid at the contract unit price per each for TREE WELL (structural cells – 2 stacked). This price will include the installation of one Tree Well (structural cells) unit comprised of two (2) structural cell frames stacked on top of each other including base and top deck as detailed in the plans and described herein. This price shall also include the excavation, aggregate sub-base, geo-grid, geotextile, root barrier, backfill and furnishing and placing the topsoil as described in herein and the special provisions for Topsoil Furnish and Placement. Subsurface drainage, aggregate base course and aggregate setting bed will be paid as described elsewhere.

END OF SECTION

XX006901 TREE GRATE ASSEMBLY, COMPLETE

Description

This work shall consist of furnishing and installing precast tinted concrete tree rings with grates at locations as shown in the plans and in accordance with the details shown in the plans and with the applicable articles of Sections 503 and 504 of the Standard Specifications.

Materials

Concrete Tree Rings: Shop drawings of the proposed tree rings will be required to be approved by the Engineer prior to ordering and fabrication. Six inch square samples will be required for the color of precast concrete showing the full range of color, texture and pattern variations expected. Each sample must be labeled to identify the color, aggregate sizes, aggregate types and proportions. The proposed colors submitted for approval shall be:

Color A - 238 Thyme as manufactured by S.G.S. Solomon Colors or
Color B - C-20 Limestone, as manufactured by L.M. Scofield Company.

Grates: The grates shall steel frames and shall be the type manufactured by the following:

Urban Industries or approved equal
465 East 15th St.
Tacoma, WA. 98421
Telephone: 877-487-0488

Grates shall be raw iron, 53-1/4" diameter Rainbow Tree Grates with 54" diameter Type "R", raw steel Frames. Shop drawings of the proposed grates, frames and accessories will be required to be approved by the Engineer prior to ordering and fabrication.

Measurement and Payment

This work will be paid for at the contract unit price each for TREE GRATE ASSEMBLY, COMPLETE, which price shall be considered payment in full for all labor, equipment, excavation, tinted concrete, grates, frames, and accessories necessary to complete the work as specified.

Z0050600 REMOVE AND RESET ORNAMENTAL FENCE

Description

This work shall consist of the removal, storage and resetting of the existing ornamental fence at the locations shown on the plans and as directed by the Engineer. The existing fence shall be removed and stored on site so as to prevent damage to the materials. Any excess fence materials shall remain on site and become property of the Town of Normal. The fence shall be reset and anchored to concrete walls or blocks using the same type of materials and methods as used for the existing installation and shall meet the approval of the Engineer. The existing fence materials that are damaged or are not useable, shall be replaced by the Contractor at his/her expense.

Measurement and Payment

This work will be measured for payment at the contract unit price per foot for REMOVE AND RESET ORNAMENTAL FENCE. Measurement shall be along the top of the finished reset fence from end post to end post or end connection point. The length of fence removed will not be paid for separately and may be greater than the length of the reset fence. The price shall be considered payment in full for all materials, labor and equipment to perform this work including anchor bolts and accessories, and any new fence materials that may be required.

STATUS OF UTILITIES TO BE ADJUSTED

The intent is for utility adjustments to be made during construction of the plaza and the Contractor will be required to cooperate with the Utility Companies while they perform their work. See the special provision LR105 "Cooperation With Utilities" within these special provisions. Utility Companies have been provided the following information.

Status
A – Indicates item to be adjusted
R – Indicates item to be relocated or removed
NW – Indicates no work required
* - Indicates possibility of a conflict with the proposed improvements requiring further field investigation by the Contractor and utility owner.

Name & Address of Utility CO.	Type	Location	Status
Town of Normal 100 East Phoenix Normal, Illinois 61761	Children's Museum Backup Generator	West side of Museum	Moved by Town prior to construction
	Street Light System	See plans for locations for adjustments of street lights, handholes, and electric conduits/cables	Moved by Town during construction
	Water Mains and Appurtenances	Within plaza and sidewalk areas	Moved by Town during construction
Ameren IP 501 East Lafayette St. Bloomington, Illinois 61701	Power Poles and Underground Electric Cables	Within plaza and sidewalk areas	No overhead electric. U.G. electric unknown. Contractor to verify.
NICOR Gas 1844 Ferry Road Naperville, Illinois 60563	Gas Mains	Within plaza and sidewalk areas	U.G. Gas unknown. Contractor to verify.

Name & Address of Utility CO.	Type	Location	Status
Verizon 2319 W. Market St. Bloomington, Illinois 61704	Telephone Lines	Within plaza and sidewalk areas	U.G. Telephone unknown. Contractor to verify.
Comcast 1202 W. Division St. Normal, Illinois 61761	Television and Communication Systems	Within plaza and sidewalk areas	No overhead Lines. U.G. lines unknown. Contractor to verify.

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:

Town of Normal, Illinois

100 E. Phoenix

Normal, Illinois 61761

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

ALKALI-SILICA REACTION FOR CAST-IN-PLACE CONCRETE (BDE)

Effective: August 1, 2007
Revised: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to precast products or precast prestressed products.

Aggregate Expansion Values. Each coarse and fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

AGGREGATE GROUPS			
Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion	Fine Aggregate or Fine Aggregate Blend ASTM C 1260 Expansion		
	≤ 0.16%	> 0.16% - 0.27%	> 0.27%
≤ 0.16%	Group I	Group II	Group III
> 0.16% - 0.27%	Group II	Group II	Group III
> 0.27%	Group III	Group III	Group IV

Mixture Options. Based upon the aggregate group, the following mixture options shall be used; however, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

Group I - Mixture options are not applicable. Use any cement or finely divided mineral.
Group II - Mixture options 1, 2, 3, 4, or 5 shall be used.
Group III - Mixture options 1, 2 and 3 combined, 4, or 5 shall be used.

Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

For Class PP-3 concrete the mixture options are not applicable, and any cement may be used with the specified finely divided minerals.

a) Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used.

When a coarse or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

Weighted Expansion Value = (a/100 x A) + (b/100 x B) + (c/100 x C) + ...

Where: a, b, c... = percentage of aggregate in the blend;
A, B, C...= expansion value for that aggregate.

b) Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. The replacement ratio is defined as "finely divided mineral:portland cement".

1) Class F Fly Ash. For Class PV, BS, MS, DS, SC, and SI concrete and cement aggregate mixture II (CAM II), Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

2) Class C Fly Ash. For Class PV, MS, SC, and SI Concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.

For Class PP-1, RR, BS, and DS concrete and CAM II, Class C fly ash with less than 26.5 percent calcium oxide content shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

3) Ground Granulated Blast-Furnace Slag. For Class PV, BS, MS, SI, DS, and SC concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.

For Class PP-1 and RR concrete, ground granulated blast-furnace slag shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

For Class PP-2, ground granulated blast-furnace slag shall replace 25 to 30 percent of the portland cement at a minimum replacement ratio of 1:1.

4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.

c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.

d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.

e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. For latex concrete, the ASTM C 1567 test shall be performed without the latex. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ($Na_2O + 0.658K_2O$), a new ASTM C 1567 test will not be required.

Testing. If an individual aggregate has an ASTM C 1260 expansion value > 0.16 percent, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The ASTM C 1293 test shall be performed with Type I or II cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container or wick of absorbent material, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 or 1567 test result. The Engineer will not accept the result if the precision and bias for the test methods are not met.

The laboratory performing the ASTM C 1567 test shall either be accredited by the AASHTO Materials Reference Laboratory (AMRL) for ASTM C 227 under Portland Cement Concrete or Aggregate; or shall be inspected for Hydraulic Cement - Physical Tests by the Cement and Concrete Reference Laboratory (CCRL) and shall be approved by the Department. The laboratory performing the ASTM C 1293 test shall be inspected for Portland Cement Concrete by CCRL and shall be approved by the Department.

80186

ALKALI-SILICA REACTION FOR PRECAST AND PRECAST PRESTRESSED CONCRETE (BDE)

Effective: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in precast and precast prestressed concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to cast-in-place concrete.

Aggregate Expansion Values. Each coarse and fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

AGGREGATE GROUPS			
Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion	Fine Aggregate or Fine Aggregate Blend ASTM C 1260 Expansion		
	≤ 0.16%	> 0.16% - 0.27%	> 0.27%
≤ 0.16%	Group I	Group II	Group III
> 0.16% - 0.27%	Group II	Group II	Group III
> 0.27%	Group III	Group III	Group IV

Mixture Options. Based upon the aggregate group, the following mixture options shall be used; however, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

Group I - Mixture options are not applicable. Use any cement or finely divided mineral.
Group II - Mixture options 1, 2, 3, 4, or 5 shall be used.
Group III - Mixture options 1, 2 and 3 combined, 4, or 5 shall be used.

Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

a) Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used.

When a coarse or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

Weighted Expansion Value = (a/100 x A) + (b/100 x B) + (c/100 x C) + ...

Where: a, b, c... = percentage of aggregate in the blend;
A, B, C...= expansion value for that aggregate.

b) Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. The replacement ratio is defined as "finely divided mineral:portland cement".

1) Class F Fly Ash. For Class PC concrete, precast products, and PS concrete, Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

2) Class C Fly Ash. For Class PC Concrete, precast products, and Class PS concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.

3) Ground Granulated Blast-Furnace Slag. For Class PC concrete, precast products, and Class PS concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.

4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.

c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.

d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.

e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in

the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ($Na_2O + 0.658K_2O$), a new ASTM C 1567 test will not be required.

Testing. If an individual aggregate has an ASTM C 1260 expansion value > 0.16 percent, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The ASTM C 1293 test shall be performed with Type I or II cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container or wick of absorbent material, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 or 1567 test result. The Engineer will not accept the result if the precision and bias for the test methods are not met.

The laboratory performing the ASTM C 1567 test shall either be accredited by the AASHTO Materials Reference Laboratory (AMRL) for ASTM C 227 under Portland Cement or Aggregate; or shall be inspected for Hydraulic Cement - Physical Tests by the Cement and Concrete Reference Laboratory (CCRL) and shall be approved by the Department. The laboratory performing the ASTM C 1293 test shall be inspected for Portland Cement Concrete by CCRL and shall be approved by the Department.

80213

APPROVAL OF PROPOSED BORROW AREAS, USE AREAS, AND/OR WASTE AREAS (BDE)

Effective: November 1, 2008
Revised: November 1, 2010

Replace the first paragraph of Article 107.22 of the Standard Specifications with the following:

"All proposed borrow areas, including commercial borrow areas; use areas, including, but not limited to temporary access roads, detours, runarounds, plant sites, and staging and storage areas; and/or waste areas are to be designated by the Contractor to the Engineer and approved prior to their use. Such areas outside the State of Illinois shall be evaluated, at no additional cost to the Department, according to the requirements of the state in which the area lies; and approval by the authority within that state having jurisdiction for such areas shall be forwarded to the Engineer. Such areas within Illinois shall be evaluated as described herein.

A location map delineating the proposed borrow area, use area, and/or waste area shall be submitted to the Engineer for approval along with an agreement from the property owner granting the Department permission to enter the property and conduct cultural and biological resource reconnaissance surveys of the site for archaeological resources, threatened or endangered species or their designated essential habitat, wetlands, prairies, and savannahs. The type of location map submitted shall be a topographic map, a plat map, or a 7.5 minute quadrangle map. Submittals shall include the intended use of the site and provide sufficient detail for the Engineer to determine the extent of impacts to the site. The Engineer will initiate cultural and biological resource reconnaissance surveys of the site, as necessary, at no cost to the Contractor. The Engineer will advise the Contractor of the expected time required to complete all surveys. If the proposed area is within 150 ft (45 m) of the highway right-of-way, a topographic map of the proposed site will be required as specified in Article 204.02."

80207

CEMENT (BDE)

Effective: January 1, 2007
Revised: April 1, 2011

Revise Section 1001 of the Standard Specifications to read:

"**SECTION 1001. CEMENT**

1001.01 Cement Types. Cement shall be according to the following.

(a) Portland Cement. Acceptance of portland cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland cement shall be according to AASHTO M 85, and shall meet the standard physical and chemical requirements. The Contractor has the option to use any type of portland cement listed in AASHTO M 85 unless a specific cement is specified for a construction item. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302, Class C or F fly ash according to the chemical requirements of AASHTO M 295, and cement kiln dust.

(b) Portland-Pozzolan Cement. Acceptance of portland-pozzolan cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland-pozzolan cement shall be according to AASHTO M 240 and shall meet the standard physical and chemical requirements. The Contractor has the option to use portland-pozzolan cement unless a specific cement is specified for a construction item. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302, Class C or F fly ash according to the chemical requirements of AASHTO M 295, and cement kiln dust. The pozzolan constituent for Type IP using Class F fly ash shall be a maximum of 25 percent of the weight (mass) of the portland-pozzolan cement. The pozzolan constituent for Type IP using Class C fly ash shall be a maximum of 30 percent of the weight (mass) of the portland-pozzolan cement. The pozzolan constituent for Type IP using microsilica or high-reactivity metakaolin shall be a maximum of ten percent. The pozzolan constituent for Type IP using other materials shall have the approval of the Engineer.

Portland-pozzolan cement may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.

(c) Portland Blast-Furnace Slag Cement. Acceptance of portland blast-furnace slag cement shall be according to the current Bureau of Materials and Physical Research's Policy

Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland blast-furnace slag cement shall be according to AASHTO M 240 and shall meet the standard physical and chemical requirements. The Contractor has the option to use portland blast-furnace slag cement unless a specific cement is specified for a construction item. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302, Class C or F fly ash according to the chemical requirements of AASHTO M 295, and cement kiln dust. The blast-furnace slag constituent for Type IS shall be a maximum of 35 percent of the weight (mass) of the portland blast-furnace slag cement.

Portland blast-furnace slag cement may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.

(d) Rapid Hardening Cement. Rapid hardening cement shall be used according to Article 1020.04 or when approved by the Engineer. The cement shall be on the Department's current "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs", and shall be according to the following.

(1) The cement shall have a maximum final set of 25 minutes, according to Illinois Modified AASHTO T 131.

(2) The cement shall have a minimum compressive strength of 2000 psi (13,800 kPa) at 3.0 hours, 3200 psi (22,100 kPa) at 6.0 hours, and 4000 psi (27,600 kPa) at 24.0 hours, according to Illinois Modified AASHTO T 106.

(3) The cement shall have a maximum drying shrinkage of 0.050 percent at seven days, according to Illinois Modified ASTM C 596.

(4) The cement shall have a maximum expansion of 0.020 percent at 14 days, according to Illinois Modified ASTM C 1038.

(5) The cement shall have a minimum 80 percent relative dynamic modulus of elasticity; and shall not have a weight (mass) gain in excess of 0.15 percent or a weight (mass) loss in excess of 1.0 percent, after 100 cycles, according to Illinois Modified AASHTO T 161, Procedure B.

(e) Calcium Aluminate Cement. Calcium aluminate cement shall be used according to Article 1020.04 or when approved by the Engineer. The cement shall meet the standard physical requirements for Type I cement according to AASHTO M 85, except the time of setting shall not apply. The chemical requirements shall be determined according to AASHTO T 105 and shall be as follows: minimum 38 percent aluminum oxide (Al_2O_3), maximum 42 percent calcium oxide (CaO), maximum 1 percent magnesium oxide

(MgO), maximum 0.4 percent sulfur trioxide (SO_3), maximum 1 percent loss on ignition, and maximum 3.5 percent insoluble residue.

1001.02 Uniformity of Color. Cement contained in single loads or in shipments of several loads to the same project shall not have visible differences in color.

1001.03 Mixing Brands and Types. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall not be mixed or used alternately in the same item of construction unless approved by the Engineer.

1001.04 Storage. Cement shall be stored and protected against damage, such as dampness which may cause partial set or hardened lumps. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall be kept separate."

80166

CONCRETE ADMIXTURES (BDE)

Effective: January 1, 2003
Revised: April 1, 2009

Replace the first paragraph of Article 1020.05(b) of the Standard Specifications to read:

"(b) Admixtures. The use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted when approved by the Engineer. Admixture dosages shall result in the mixture meeting the specified plastic and hardened properties. The Department will maintain an Approved List of Corrosion Inhibitors. Corrosion inhibitor dosage rates shall be according to Article 1020.05(b)(12). The Department will also maintain an Approved List of Concrete Admixtures, and an admixture technical representative shall be consulted when determining an admixture dosage from this list. The dosage shall be within the range indicated on the approved list unless the influence by other admixtures, jobsite conditions (such as a very short haul time), or other circumstances warrant a dosage outside the range. The Engineer shall be notified when a dosage is proposed outside the range. To determine an admixture dosage, air temperature, concrete temperature, cement source and quantity, finely divided mineral sources(s) and quantity, influence of other admixtures, haul time, placement conditions, and other factors as appropriate shall be considered. The Engineer may request the Contractor to have a batch of concrete mixed in the lab or field to verify the admixture dosage is correct. An admixture dosage or combination of admixture dosages shall not delay the initial set of concrete by more than one hour. When a retarding admixture is required or appropriate for a bridge deck or bridge deck overlay pour, the initial set time shall be delayed until the deflections due to the concrete dead load are no longer a concern for inducing cracks in the completed work. However, a retarding admixture shall not be used to further extend the pour time and justify the alteration of a bridge deck pour sequence.

When determining water in admixtures for water/cement ratio, the Contractor shall calculate 70 percent of the admixture dosage as water, except a value of 50 percent shall be used for a latex admixture used in bridge deck latex concrete overlays."

Revise Section 1021 of the Standard Specifications to read:

"SECTION 1021. CONCRETE ADMIXTURES

1021.01 General. Admixtures shall be furnished in liquid form ready for use. The admixtures shall be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer and trade name of the material. Containers shall be readily identifiable as to manufacturer and trade name of the material they contain.

Corrosion inhibitors will be maintained on the Department's Approved List of Corrosion Inhibitors. All other concrete admixture products will be maintained on the Department's

Approved List of Concrete Admixtures. For the admixture submittal, a report prepared by an independent laboratory accredited by the AASHTO Materials Reference Laboratory (AMRL) for Portland Cement Concrete shall be provided. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications. However, for corrosion inhibitors the ASTM G 109 test information specified in ASTM C 1582 is not required to be from and independent lab. All other information in ASTM C 1582 shall be from and independent lab.

Tests shall be conducted using materials and methods specified on a "test" concrete and a "reference" concrete, together with a certification that no changes have been made in the formulation of the material since the performance of the tests. Per the manufacturer's option, the cement content for all required tests shall either be according to applicable specifications or 5.65 cwt/cu yd (335 kg/cu m). Compressive strength test results for six months and one year will not be required.

Prior to the approval of an admixture, the Engineer reserves the right to request a sample for testing. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). For freeze-thaw testing, the Department will perform the test according to AASHTO T 161, Procedure B. The flexural strength test will be performed according to AASHTO T 177. If the Engineer decides to test the admixture, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The test and reference concrete mixture shall contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by AASHTO.

The manufacturer shall include in the submittal the following admixture information: the manufacturing range for specific gravity, the midpoint and manufacturing range for residue by oven drying, and the manufacturing range for pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

For air-entraining admixtures according to Article 1021.02, the specific gravity allowable manufacturing range shall be established by the manufacturer and the test method shall be according to ASTM C 494. For residue by oven drying and pH, the allowable manufacturing range and test methods shall be according to ASTM C 260.

For admixtures according to Articles 1021.03, 1021.04, 1021.05, 1021.06, and 1021.07, the pH allowable manufacturing range shall be established by the manufacturer and the test method shall be according to ASTM E 70. For specific gravity and residue by oven drying, the allowable manufacturing range and test methods shall be according to ASTM C 494.

When test results are more than seven years old, the manufacturer shall re-submit the infrared spectrophotometer trace and the report prepared by an independent laboratory accredited by AASHTO.

All admixtures, except chloride-based accelerators, shall contain a maximum of 0.3 percent chloride by weight (mass).

Random field samples may be taken by the Department to verify an admixture meets specification. A split sample will be provided to the manufacturer if requested. Admixtures that do not meet specification requirements or an allowable manufacturing range established by the manufacturer shall be replaced with new material.

1021.02Air-Entraining Admixtures. Air-entraining admixtures shall be according to AASHTO M 154.

1021.03Retarding and Water-Reducing Admixtures. The admixture shall be according to the following.

(a) The retarding admixture shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).

(b) The water-reducing admixture shall be according to AASHTO M 194, Type A.

(c) The high range water-reducing admixture shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

1021.04Accelerating Admixtures. The admixture shall be according to AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating).

1021.05Self-Consolidating Admixtures. The self-consolidating admixture system shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a concrete mixture that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

The high range water-reducing admixture shall be according to AASHTO M 194, Type F.

The viscosity modifying admixture shall be according to ASTM C 494, Type S (specific performance).

1021.06Rheology-Controlling Admixture. The rheology-controlling admixture shall be capable of producing a concrete mixture with a lower yield stress that will consolidate easier for slipform applications used by the Contractor. The rheology-controlling admixture shall be according to ASTM C 494, Type S (specific performance).

1021.07Corrosion Inhibitor. The corrosion inhibitor shall be according to one of the following.

(a) Calcium Nitrite. The corrosion inhibitor shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution, and shall comply with the requirements of AASHTO M 194, Type C (accelerating).

(b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582."

80094

CONSTRUCTION AIR QUALITY - DIESEL VEHICLE EMISSIONS CONTROL (BDE)

Effective: April 1, 2009
Revised: July 1, 2009

Diesel Vehicle Emissions Control. The reduction of construction air emissions shall be accomplished by using cleaner burning diesel fuel. The term "equipment" refers to any and all diesel fuel powered devices rated at 50 hp and above, to be used on the project site in excess of seven calendar days over the course of the construction period on the project site (including any "rental" equipment).

All equipment on the jobsite, with engine ratings of 50 hp and above, shall be required to: use Ultra Low Sulfur Diesel fuel (ULSD) exclusively (15 ppm sulfur content or less).

Diesel powered equipment in non-compliance will not be allowed to be used on the project site, and is also subject to a notice of non-compliance as outlined below.

The Contractor shall submit copies of monthly summary reports and include certified copies of the ULSD diesel fuel delivery slips for diesel fuel delivered to the jobsite for the reporting time period, noting the quantity of diesel fuel used.

If any diesel powered equipment is found to be in non-compliance with any portion of this specification, the Engineer will issue the Contractor a notice of non-compliance and identify an appropriate period of time, as outlined below under environmental deficiency deduction, in which to bring the equipment into compliance or remove it from the project site.

Any costs associated with bringing any diesel powered equipment into compliance with these diesel vehicle emissions controls 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 also not be grounds for a claim.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists, he/she will notify the Contractor in writing, and direct the Contractor to correct the deficiency within a specified time period. The specified time-period, which begins upon Contractor notification, will be from 1/2 hour to 24 hours long, based on the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge regarding the time period.

The deficiency will be based on lack of repair, maintenance and diesel vehicle emissions control.

If the Contractor fails to correct the deficiency within the specified time frame, 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.

If a Contractor or subcontractor accumulates three environmental deficiency deductions 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 contract time, waiver of penalties, or be grounds for any claim.

80237

CONSTRUCTION AIR QUALITY - IDLING RESTRICTIONS (BDE)

Effective: April 1, 2009

Idling Restrictions. The Contractor shall establish truck-staging areas for all diesel powered vehicles that are waiting to load or unload material at the jobsite. Staging areas shall be located where the diesel emissions from the equipment will have a minimum impact on adjacent sensitive receptors. The Department will review the selection of staging areas, whether within or outside the existing highway right-of-way, to avoid locations near sensitive areas or populations to the extent possible. Sensitive receptors include, but are not limited to, hospitals, schools, residences, motels, hotels, daycare facilities, elderly housing and convalescent facilities. Diesel powered engines shall also be located as far away as possible from fresh air intakes, air conditioners, and windows. The Engineer will approve staging areas before implementation.

Diesel powered vehicle operators may not cause or allow the motor vehicle, when it is not in motion, to idle for more than a total of 10 minutes within any 60 minute period, except under any of the following circumstances:

1) The motor vehicle has a gross vehicle weight rating of less than 8000 lb (3630 kg).
2) The motor vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
3) The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.
4) A police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator.
5) The primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.
6) A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
7) When idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations, lumbering operations; oil or gas well servicing; or farming operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions.
8) When the motor vehicle idles due to mechanical difficulties over which the operator has no control.
9) The outdoor temperature is less than 32 °F (0 °C) or greater than 80 °F (26 °C).

When the outdoor temperature is greater than or equal to 32 °F (0 °C) or less than or equal to 80 °F (26 °C), a person who operates a motor vehicle operating on diesel fuel shall not cause or allow the motor vehicle to idle for a period greater than 30 minutes in any 60 minute period while waiting to weigh, load, or unload cargo or freight, unless the vehicle is in a line of vehicles that regularly and periodically moves forward.

The above requirements do not prohibit the operation of an auxiliary power unit or generator set as an alternative to idling the main engine of a motor vehicle operating on diesel fuel.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists based on non-compliance with the idling restrictions, he/she will notify the Contractor, and direct the Contractor to correct the deficiency.

If the Contractor fails to correct the deficiency a monetary deduction will be imposed. The monetary deduction will be $1,000.00 for each deficiency identified.

80239

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000
Revised: August 2, 2011

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor.

> The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is

based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 15.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

(a) The bidder documents that enough DBE participation has been obtained to meet the goal: or

(b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's website at www.dot.il.gov.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement. The failure of the bidder to comply will render the bid not responsive.

(a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.

(b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.

(c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:

(1) The names and addresses of DBE firms that will participate in the contract;

(2) A description, including pay item numbers, of the work each DBE will perform;

(3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;

(4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;

(5) if the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,

(6) If the contract goal if not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work performance to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

(1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.

(5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.

(7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.

(8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.

(b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination.

(c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is

generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.

(d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:

    (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

    (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.

(e) DBE as a material supplier:

    (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

    (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.

    (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement.

(a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217)785-4611. Telefax number (217)785-1524.

(b) TERMINATION OR REPLACEMENT. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.

(c) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, than a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.

(d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

(1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or

(2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or

(3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

(e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

(1) The listed DBE subcontractor fails or refuses to execute a written contract;

(2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;

(3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;

(4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;

(5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.

(6) You have determined that the listed DBE subcontractor is not a responsible contractor;

(7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;

(8) The listed DBE is ineligible to receive DBE credit for the type of work required;

(9) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;

(10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated, or fails to complete its work on the Contract for any reason the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal.

(f) PAYMENT RECORDS. The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the BDE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative

reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

(g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

(h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor my request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

80029

EQUIPMENT RENTAL RATES (BDE)

Effective: August 2, 2007
Revised: January 2, 2008

Replace the second and third paragraphs of Article 105.07(b)(4)a. of the Standard Specifications with the following:

"Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4)."

Replace Article 109.04(b)(4) of the Standard Specifications with the following:

"(4) Equipment. Equipment used for extra work shall be authorized by the Engineer. The equipment shall be specifically described, be of suitable size and capacity for the work to be performed, and be in good operating condition. For such equipment, the Contractor will be paid as follows.

a. Contractor Owned Equipment. Contractor owned equipment will be paid for by the hour using the applicable FHWA hourly rate from the "Equipment Watch Rental Rate Blue Book" (Blue Book) in effect when the force account work begins. The FHWA hourly rate is calculated as follows.

FHWA hourly rate = (monthly rate/176) x (model year adj.) x (Illinois adj.) + EOC

Where: EOC = Estimated Operating Costs per hour (from the Blue Book)

The time allowed will be the actual time the equipment is operating on the extra work. For the time required to move the equipment to and from the site of the extra work and any authorized idle (standby) time, payment will be made at the following hourly rate: 0.5 x (FHWA hourly rate - EOC).

All time allowed shall fall within the working hours authorized for the extra work.

The rates above include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, and all incidentals. The rates do not include labor.

The Contractor shall submit to the Engineer sufficient information for each piece of equipment and its attachments to enable the Engineer to determine the proper equipment category. If a rate is not established in the Blue Book for a particular piece of equipment, the Engineer will establish a rate for that piece of equipment that is consistent with its cost and use in the industry.

b. Rented Equipment. Whenever it is necessary for the Contractor to rent equipment to perform extra work, the rental and transportation costs of the equipment plus five percent for overhead will be paid. In no case shall the rental rates exceed those of established distributors or equipment rental agencies.

All prices shall be agreed to in writing before the equipment is used."

80189

LIQUIDATED DAMAGES (BDE)

Effective: April 1, 2009
Revised: April 1, 2011

Revise the table in Article 108.09 of the Standard Specifications to read:

"Schedule of Deductions for Each Day of Overrun in Contract Time			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
$ 0	$ 100,000	$ 475	$ 675
100,000	500,000	750	1,050
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,275	1,725
3,000,000	6,000,000	1,425	2,000
6,000,000	12,000,000	2,300	3,450
12,000,000	And over	5,800	8,125"

80230

METAL HARDWARE CAST INTO CONCRETE (BDE)

Effective: April 1, 2008
Revised: April 1, 2009

Add the following to Article 503.02 of the Standard Specifications:

"(g) Metal Hardware Cast into Concrete ..... 1006.13"

Add the following to Article 504.02 of the Standard Specifications:

"(j) Metal Hardware Cast into Concrete ..... 1006.13"

Revise Article 1006.13 of the Standard Specifications to read:

"**1006.13 Metal Hardware Cast into Concrete.** Unless otherwise noted, all steel hardware cast into concrete, such as inserts, brackets, cable clamps, metal casings for formed holes, and other miscellaneous items, shall be galvanized according to AASHTO M 232 or AASHTO M 111. Aluminum inserts will not be allowed. Zinc alloy inserts shall be according to ASTM B 86, Alloys 3, 5, or 7.

The inserts shall be UNC threaded type anchorages having the following minimum certified proof load.

Insert Diameter	Proof Load
5/8 in. (16 mm)	6600 lb (29.4 kN)
3/4 in. (19 mm)	6600 lb (29.4 kN)
1 in. (25 mm)	9240 lb (41.1 kN)"

80203

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000
Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

PLANTING PERENNIAL PLANTS (BDE)

Effective: January 1, 2011

Revise Section 254 of the Standard Specifications to read:

"SECTION 254. PLANTING PERENNIAL PLANTS

254.01 Description. This work shall consist of furnishing, transporting, and planting perennial plants.

254.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Bulb Type	1081.02(a)
(b) Ornamental Type	1081.02(b)
(c) Prairie Type	1081.02(b)
(d) Wetland Emergent Type	1081.02(b)
(e) Sedge Meadow Type	1081.02(b)
(f) Woodland Type	1081.02(b)
(g) Mulch	1081.06(b)

254.03 Planting Time. Planting times for the various types of perennial plants shall be as follows.

(a) Bulb Type. Bulb Type plants shall be planted between October 15 and November 15.

(b) Ornamental Type, Prairie Type, Wetland Emergent Type, and Sedge Meadow Type plants shall be planted between May 1 and June 15 or between August 15 and September 15.

(c) Woodland Type plants shall be planted between April 1 and May 15.

254.04 Transporting and Storing Plants. The Engineer will inspect the plants at the work site at the beginning of each planting day and reject any material that is not properly packaged (including clear labeling by species) or that is not in a firm, moist, or viable condition. Any plants remaining at the end of the day shall be removed from the work site and properly stored by the Contractor. Before planting, sufficient water shall be added to potted plants to insure that the soil around the roots is not dry and crumbly when the plants are removed from the pots.

254.05 Layout of Planting. When plants are specified to be planted in prepared soil planting beds, the planting bed shall be approved by the Engineer prior to planting. If no prepared soil planting bed is specified, the plants shall be planted in areas that have existing cover or have been seeded and mulched or sodded. Where perennial plants, except bulb type plants, shall be planted, the planting beds shall be delineated with selective mowing stakes. Selective mowing stakes shall be according to Article 250.08.

254.06 Planting Procedures. The spacing of the plants shall be as shown on the plans, or as directed by the Engineer, to uniformly fill the planting beds. Individual plants within the beds shall be planted as follows.

(a) Bulb Type. Bulb type plants shall be planted to a depth of 6 in. (150 mm) in turf areas or prepared beds.

(b) Ornamental Type, Prairie Type, Wetland Emergent Type, Sedge Meadow Type, and Woodland Type. When planted in prepared soil planting beds, these plants shall be planted by a hand method approved by the Engineer.

When planted in existing turf, the planting area shall be mowed to a maximum height of 2 in. (50 mm).

In existing cover, or seeded and mulched or sodded planting areas, a 12 in. (300 mm) diameter planting area for individual plants shall be prepared. The existing cover, or seed and mulch shall be cut and removed from the 12 in. (300 mm) diameter planting area and the soil within the planting area loosened to a depth of 6 in. (150 mm). The plants shall be planted within the planting area and immediately watered with at least 1 gal (5 L) of water per plant.

254.07 Mulching. Within 24 hours, the plants shall be mulched with 2 in. (50 mm) of a fine grade mulch meeting the approval of the Engineer. Care shall be taken to place the mulch in a way that does not smother the plants. When plants are planted in prepared soil planting beds, the entire bed shall be mulched. Bulb type plants planted in existing turf need not be mulched.

254.08 Period of Establishment. Period of Establishment for the various types of perennial plants shall be as follows.

(a) No period of establishment will be required for bulb type plants.

(b) Perennial plants must undergo a 30 day period of establishment. Additional waterings shall be performed at least once within every seven days for four weeks following installation. Water shall be applied at the rate of 2 gal/sq yd (9 L/sq m). Should excess moisture prevail, the Engineer may delete any or all of the additional watering cycles. In severe weather, the Engineer may require additional waterings.

Watering of plants in beds shall be applied in such a manner that all plant holes are uniformly saturated without allowing the water to flow beyond the periphery of the bed.

At the end of the period of establishment, the Contractor will be permitted to replace any unacceptable plants and shall thoroughly weed all the beds.

254.09 Method of Measurement. This work will be measured for payment in units of 100 perennial plants of the type and size specified. Measurement for payment of this work will not

be performed until at the end of the 30 day establishment period for the replacement planting. Only plants that are in place and alive at the time of measurement will be measured for payment, except that if fewer than 25 percent of the plants are acceptable, a quantity equal to 25 percent of the number of units of plants originally planted will be considered measured for payment. Selective mowing stakes will be measured for payment as each in place.

254.10 Basis of Payment. This work will be paid for at the contract unit price per unit for PERENNIAL PLANTS, of the type and size specified.

Selective mowing stakes will be paid for at the contract unit price per each for SELECTIVE MOWING STAKES."

Revise Article 1081.02 of the Standard Specifications to read:

"**1081.02 Perennial Plants.** Perennial plants shall be as follows.

(a) Bulb Type. Bulb type plants shall include bulbs, tubers, rhizomes, and corms. Bulb type plants shall meet the current standards adopted by the ANLA. The Contractor shall furnish the Engineer a shipping ticket or label documenting that the variety, color, and size of the bulb type plants supplied are as specified in the plans.

(b) Ornamental Type, Prairie Type, Wetland Emergent Type, Sedge Meadow Type, and Woodland Type. These plants shall meet the current standards adopted by the ANLA. Flats or lots of plants shall be clearly labeled by variety, and the Contractor shall furnish the Engineer a shipping ticket or label documenting that the plants supplied are of the variety specified in the plans."

80263

POST MOUNTING OF SIGNS (BDE)

Effective: January 1, 2011

Revise the second paragraph of Article 701.14 of the Standard Specifications to read:

"Post mounted signs shall be a breakaway design. The sign shall be within five degrees of vertical. Two posts shall be used for signs greater than 16 sq ft (1.5 sq m) in area or where the height between the sign and the ground exceeds 7 ft (2.1 m)."

80268

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
Union Pacific Railroad Co. Industrial Development Dept. 1400 Douglas St. – Stop 1370 Omaha, NE 68179-1370	6 Passenger at 79 mph	4 Freights at 60 mph

DOT/AAR No.: 290810P / 290812D RR Mile Post: 0124.00
RR Division: RR Sub-Division:
For Freight/Passenger Information Contact: David McKernan Phone: 314-331-0682
For Insurance Information Contact: David McKernan Phone: 314-331-0682

DOT/AAR No.: RR Mile Post:
RR Division: RR Sub-Division:
For Freight/Passenger Information Contact: Phone:
For Insurance Information Contact: Phone:

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

Illinois Department of Transportation
Bureau of Design and Environment
2300 South Dirksen Parkway, Room 326
Springfield, Illinois 62764

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)

Effective: July 1, 2004
Revised: July 1, 2010

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. The mix design criteria shall be as follows:

(a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).

(b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.

(c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.

(d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.

(e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.

(f) The visual stability index shall be a maximum of 1.

(g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.

(h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.

(i) The hardened visual stability index shall be a maximum of 1.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer

performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Placing and Consolidating. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer.

Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

80132

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: April 2, 2005
Revised: April 1, 2011

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting according to Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

The mobilization payment to the subcontractor is an advance payment of the reported amount of the subcontract and is not a payment in addition to the amount of the subcontract; therefore, the amount of the advance payment will be deducted from future progress payments.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

80143

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: August 1, 2011

Revise the third sentence of the third paragraph of Article 105.03(b) of the Standard Specifications to read:

"The daily monetary deduction will be $2,500."

80273

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all word 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.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4 and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 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 DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

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 and 41 CFR 60 (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 Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American 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 State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
b. The contractor will accept as his 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, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO 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 minority group employees.
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 minority groups 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 employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group 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, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group 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 his 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 his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
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. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.
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 minority group and women employees 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 his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. 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 best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
b. The contractor will use best 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 SHA 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 minority and women 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 quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) 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 SHA.

8. 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.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.
c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. 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 completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:
(1) The number 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;
(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and
(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.
b. The contractors will submit an annual report to the SHA 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. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers 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 (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) 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. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, 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 paragraphs 4 and 5 of this Section IV.

b. 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.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification 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 DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour 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.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional 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 question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advised the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. 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 or subcontractors, as

appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost 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.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) 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 DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/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 Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees 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 employee 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 listed in 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 or subcontractor 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-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) 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 journeyman-level 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 for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) 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 DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. 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.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level 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-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor 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. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. 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.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor 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, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's 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 SHA contracting officer 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.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her 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, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies 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 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof 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. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found 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 and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for submitting payroll copies of all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such 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 the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. 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 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U/S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, 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 SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such

actions 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.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on /Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

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 State. 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 contractors' own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly 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, assignee, or agent of the prime contractor.

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 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 VII 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 SHA 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 SHA 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 SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

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 SHA 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. 333).

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. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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, the following notice 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:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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 not more than $10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary 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 participant shall submit an 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 primary 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 department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary 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,""lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.
f. The prospective primary 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 primary 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 Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.
i. 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.
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.

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Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from

covered transactions by any Federal department or agency;
b. Have not within a 3-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;
c. 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 1b of this certification; and
d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary 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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2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)
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," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
e. The prospective lower tie 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.
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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
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 dealing.
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.

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Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion-Lower Tier Covered Transactions:

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 participation in this transaction 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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XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(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 his or her bid or proposal that he or she 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.