

**RETURN WITH BID**

State of \_\_\_\_\_ )  
 ) ss.  
County of \_\_\_\_\_ )

**AFFIDAVIT**

\_\_\_\_\_ (name of affiant), of \_\_\_\_\_,

\_\_\_\_\_, being first duly sworn upon oath, states as follows:

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

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name of Affiant

This instrument was acknowledged before me on the \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_ by \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

(SEAL)

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## INSTRUCTIONS

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

### PREQUALIFICATION

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

### WHO CAN BID?

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

### REQUESTS FOR AUTHORIZATION TO BID

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

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

**ABOUT AUTHORIZATION TO BID:** Firms that have not received an Authorization to Bid or Not For Bid Report within a reasonable time of complete and correct original document submittal should contact the department as to the status. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions. These documents must be received three days before the letting date.

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

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

The Internet is the Department's primary way of doing business. The subscription 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](mailto:D&Econtracts@dot.il.gov)

Technical questions about downloading these files may be directed to Tim Garman at (217)524-1624 or [Timothy.Garman@illinois.gov](mailto:Timothy.Garman@illinois.gov).

## **BID SUBMITTAL GUIDELINES AND CHECKLIST**

In an effort to eliminate confusion and standardize the bid submission process the Contracts Office has created the following guidelines and checklist for submitting bids.

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

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

### **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 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 33-41). This documentation is required only after 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 read if it is delivered after 10 AM.
- Do not submit your Substance Abuse Prevention Plan (SAPP) with your bid. If you are awarded the contract this form is to be submitted to the Division Construction Engineer at the pre-construction conference.

### **Use the following checklist to ensure completeness and the correct order in assembling your bid**

- Cover page followed by the Pay Items.** If you are using special software or CBID to generate your schedule of prices, do not include the blank schedule of prices.
- Page 5 (Item 10)** - Check "YES" if you will use a subcontractor(s). Include the subcontractor(s) 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 5,** Insert affidavit for having an office in Illinois and your State Board of Elections certificate of registration. 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 J)** - Check "YES" or "NO" whether your company has any business in Iran.
- Page 12 (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 13 (Paragraph M)** – Indicate if your company has hired a lobbyist in connection with the job for which you are submitting the bid proposal.
- Page 14 (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 16-18 (Form A)** - One Form A (3 pages) is required for each applicable person in your company. Copies of the Forms can be used and only need to be changed when the financial information changes. The certification signature and date must be original for each letting. Do not staple the forms together.

If you answered "NO" to all of the questions in Paragraph C (page 14), complete the first section (page 16) with your company information and then sign and date the Not Applicable statement on page 18.

**Page 19 (Form B)** - If you check "YES" to having other current or pending contracts it is acceptable to use the phrase, "See Affidavit of Availability on file".

**Pages 21-22 (Workforce Projection)** - Be sure to include the Duration of the Project. It is acceptable to use the phrase "Per Contract Specifications".

**Page 23 (B. Certification, Equal Employment Opportunity)** – Indicate whether or not you have participated in any previous contracts or subcontracts subject to the equal opportunity clause in part (a). If you check "YES" in part (a), complete part (b).

**Proposal Signature Sheet** – Complete and submit the proposal signature sheet provided in the proposal package.

**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.

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

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

**QUESTIONS: pre-letting up to execution of the contract**

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

**QUESTIONS: following contract execution**

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

# 4A

## RETURN WITH BID

Proposal Submitted By	
Name	
Address	
City/State	9 Digit Zip Code
Telephone No.	Fax No.
Federal Employer Identification No. (FEIN)	
Email Address	

### Letting August 3, 2012

**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.  
(SEE PRECEDING INSTRUCTIONS ON THE INSIDE OF COVER)

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



**Illinois Department of Transportation**  
DIVISION OF AERONAUTICS

Contract No. R0022  
Chicago Rockford International  
Airport  
Rockford, Illinois  
Winnebago County  
Illinois Project No. RFD-4187  
Federal Project No. N/A

**THIS PROJECT IS NOT A FEDERAL AID PROJECT.**

For engineering information, contact Marc Katz, P.E. of Crawford, Murphy & Tilly, Inc. at (630) 820-1022.

The Division of Aeronautics does not offer any material cost adjustment provisions.

PLEASE MARK THE APPROPRIATE BOX BELOW:

- A Bid Bond is included.
- A Cashier's Check or a Certified Check is included.



**PROPOSAL**

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of \_\_\_\_\_

Taxpayer Identification Number (Mandatory) \_\_\_\_\_ a

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

**Contract No. RO022  
Chicago Rockford International  
Airport  
Rockford, Illinois  
Winnebago County  
Illinois Project No. RFD-4187  
Federal Project No. N/A**

**East Terminal Parking Lot, Phase 1**

2. The undersigned bidder will furnish all labor, material and equipment to complete the above described project in a good 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. **COMPLETION TIME/LIQUIDATED DAMAGES.** It being understood and agreed that the completion within the time limit is an essential part of the contract, the bidder agrees to complete the work within 74 calendar days, unless additional time is granted by the Engineer in accordance with the provisions of the specifications. In case of failure to complete the work on or before the time named herein, or within such extra time as may have been allowed by extensions, the bidder agrees that the Department of Transportation shall withhold from such sum as may be due him/her under the terms of this contract, the costs, as set forth below, which costs shall be considered and treated not as a penalty but as damages due to the State from the bidder by reason of the failure of the bidder to complete the work within the time specified in the contract.

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

A daily charge shall be made for every day shown on the calendar beyond the specified contract time in calendar days.

**RETURN WITH BID**

4. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully examined the proposal, plans, specifications, supplemental and applicable recurring special provisions, addenda, form of contract and contract bonds, 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.
  
5. **EXECUTION OF CONTRACT AND CONTRACT BONDS.** 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.
  
6. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

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

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 contract bonds 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 bonds; 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 \_\_\_\_\_  
    Airport \_\_\_\_\_

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

## RETURN WITH BID

- 7. 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 below.

A combination bid is a total bid received on 2 or more proposals. No combination bids other than those specifically set up by the Department will be considered. Separate proposal forms will be issued for each project in the combination so bids may be submitted on the combination as well as on separate units of the combination. The Department reserves the right to make awards on combination bids or separate bids to the best advantage of the Department.

If a combination bid is submitted on 2 or more proposals, separate proposals on each individual contract shall also be submitted, and unless separate proposals are so submitted, the combination bid will not be considered. If the bidder desires to submit a combination bid, the bidder shall state, in the place provided in the proposal form, the amount of the combination bid for the entire combination.

If a combination bid is submitted on any stipulated combination, and errors are found to exist in computing the gross sum bid on any one or more of the individual proposals, corrections shall be made, by the Department and the amount of the combination bid shall be corrected so that it will be in the same proportion to the sum of the corrected gross sum bid as the combination bid submitted was to the sum of the gross sum bid submitted.

The following provisions shall govern combination bidding:

- (a) A combination bid which is submitted for 2 or more proposals and awarded on that basis shall have the bid prorated against each proposal in proportion to the bid submitted for each proposal.
- (b) Separate contracts shall be executed for each individual proposal included in the combination.
- (c) The contract time for all contracts awarded on a combination bid shall be the sum of all calendar days contained within each contract included in the combination, unless otherwise provided in the contracts.
- (d) In the event the Contractor fails to complete any or all of the contracts on the combination bid within the contract time, including any authorized extension, the liquidated damages shall be determined from the schedule of deductions shown above in paragraph 3 for each day of overrun in contract time, based on the combination bid total, and shall be computed on the combination and prorated against the 2 or more individual contracts based on the dollar value of each contract.
- (e) The plans and Special Provisions for each separate contract shall be construed separately for all requirements, except as described in paragraphs (a) through (d) listed above.



**RETURN WITH BID**

**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

**8. SCHEDULE OF PRICES.** The undersigned 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.

**9. 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.

**10. 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.

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**11. 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 the performance or payment there under except as otherwise permitted in the Illinois Procurement Code.

STATE JOB #- - - -

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - R0022

ECMS002 DTGECM03 ECMR003 PAGE 1  
 RUN DATE - 07/16/12  
 RUN TIME - 084720

COUNTY NAME	CODE	DIST	AIRPORT NAME	FED PROJECT	ILL PROJECT
WINNEBAGO	201	02	CHICAGO ROCKFORD INTERNATIONAL	- - -	RF-D -4187

\*\*\*\*\* BASE \*\*\*\*\*

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR106513	TYPE A AREA LGT POLE W/3 FIXTURES	EACH	7.000 X		=		
AR106514	TYPE A AREA LGT POLE W/4 FIXTURES	EACH	6.000 X		=		
AR106521	TYPE B AREA LGT POLE W/1 FIXTURE	EACH	5.000 X		=		
AR106905	REMOVE LIGHT POLE & FIXTURE	EACH	5.000 X		=		
AR108086	1/C #6 XLP-USE	L.F.	9,660.000 X		=		
AR108090	1/C #10 XLP-USE	L.F.	6,090.000 X		=		
AR108756	1/C #6 GROUND	L.F.	2,415.000 X		=		
AR108760	1/C #10 GROUND	L.F.	3,045.000 X		=		
AR110117	1-1/2" PVC DUCT, DIRECT BURY	L.F.	1,225.000 X		=		
AR110203	3" PVC DUCT, DIRECT BURY	L.F.	1,800.000 X		=		
AR110217	1 1/2" STEEL DUCT, DIRECT BURY	L.F.	2,305.000 X		=		
AR110314	4" STEEL DUCT, JACKED	L.F.	1,190.000 X		=		
AR110610	ELECTRICAL HANDHOLE	EACH	10.000 X		=		
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1.000 X		=		
AR150520	MOBILIZATION	L.S.	1.000 X		=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR151420	CLEARING TREES 0-2.5' BUTT. DIA.	EACH	2.000 X		=		
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	3,080.000 X		=		
AR152441	ON-SITE BORROW	C.Y.	680.000 X		=		
AR152531	EXPLORATION TRENCH	L.F.	80.000 X		=		
AR152540	SOIL STABILIZATION FABRIC	S.Y.	9,210.000 X		=		
AR156510	SILT FENCE	L.F.	310.000 X		=		
AR156511	DITCH CHECK	EACH	2.000 X		=		
AR156520	INLET PROTECTION	EACH	12.000 X		=		
AR162410	CLASS E FENCE, VINYL-10'	L.F.	320.000 X		=		
AR162900	REMOVE CLASS E FENCE	L.F.	335.000 X		=		
AR201661	CLEAN & SEAL BITUMINOUS CRACKS	L.F.	1,415.000 X		=		
AR208515	POROUS GRANULAR EMBANKMENT	C.Y.	175.000 X		=		
AR209608	CRUSHED AGG. BASE COURSE - 8"	S.Y.	9,210.000 X		=		
AR401610	BITUMINOUS SURFACE COURSE	TON	1,110.000 X		=		
AR401915	REM & REP BIT PAVEMENT - TYPE A	S.Y.	510.000 X		=		

CHICAGO ROCKFORD INTERNATIONAL  
WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
CONTRACT NUMBER - R0022

ECMS002 DTGECM03 ECMR003 PAGE 3  
RUN DATE - 07/16/12  
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR401916	REM & REP BIT PAVEMENT - TYPE B	S.Y.	120.000	X	=		
AR403610	BITUMINOUS BASE COURSE	TON	1,665.000	X	=		
AR501604	4" PCC SIDEWALK	S.F.	6,300.000	X	=		
AR501605	5" PCC SIDEWALK	S.F.	768.000	X	=		
AR501690	PCC SIDEWALK REMOVAL	S.F.	3,040.000	X	=		
AR602510	BITUMINOUS PRIME COAT	GAL.	4,745.000	X	=		
AR603510	BITUMINOUS TACK COAT	GAL.	1,425.000	X	=		
AR620520	PAVEMENT MARKING-WATERBORNE	S.F.	3,275.000	X	=		
AR620900	PAVEMENT MARKING REMOVAL	S.F.	1,000.000	X	=		
AR625510	TAR EMULSION SEAL COAT	S.Y.	2,845.000	X	=		
AR701512	12" RCP, CLASS IV	L.F.	496.000	X	=		
AR701518	18" RCP, CLASS IV	L.F.	193.000	X	=		
AR701524	24" RCP, CLASS IV	L.F.	156.000	X	=		
AR701900	REMOVE PIPE	L.F.	153.000	X	=		
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	L.F.	195.000	X	=		

CHICAGO ROCKFORD INTERNATIONAL  
WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
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ECMS002 DTGECM03 ECMR003 PAGE 4  
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR705944	ADJUST UNDERDRAIN CLEANOUT	EACH	1.000 X		=		
AR751560	MANHOLE 6'	EACH	8.000 X		=		
AR751903	REMOVE MANHOLE	EACH	1.000 X		=		
AR751927	REPLACE FRAME & GRATE	EACH	1.000 X		=		
AR751943	ADJUST MANHOLE	EACH	1.000 X		=		
AR752412	PRECAST REINFORCED CONC. FES 12"	EACH	1.000 X		=		
AR752424	PRECAST REINFORCED CONC. FES 24"	EACH	2.000 X		=		
AR752900	REMOVE END SECTION	EACH	3.000 X		=		
AR754210	CONCRETE CURB	L.F.	430.000 X		=		
AR754410	COMB CONCRETE CURB & GUTTER	L.F.	1,475.000 X		=		
AR754900	REMOVE CONCRETE CURB	L.F.	60.000 X		=		
AR754904	REMOVE COMB CURB & GUTTER	L.F.	465.000 X		=		
AR760947	ADJUST WATER VALVE	EACH	6.000 X		=		
AR770945	ADJUST SANITARY MANHOLE	EACH	2.000 X		=		
AR800089	TERMINAL BUILDING MODIFICATIONS	L.S.	1.000 X		=		

CHICAGO ROCKFORD INTERNATIONAL  
WINNEBAGO

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RUN DATE - 07/16/12  
RUN TIME - 084720

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR800097	CCTV SECURITY SYSTEM UPGRADES	L.S.	1.000 X			=	
AR800111	TYPE 3 ROADWAY SIGN	EACH	1.000 X			=	
AR800121	6" DUCTILE IRON WATER MAIN LOWERI	EACH	2.000 X			=	
AR800122	8" DUCTILE IRON WATER MAIN LOWERI	EACH	1.000 X			=	
AR800123	16" DUCTILE IRON WATER MAIN LOWER	EACH	1.000 X			=	
AR800178	FIBER OPTIC CABLE	L.F.	5,860.000 X			=	
AR902600	RELOCATE TREE	EACH	9.000 X			=	
AR904510	SODDING	S.Y.	1,410.000 X			=	
AR910200	ROADWAY SIGN	EACH	9.000 X			=	
AR910915	REMOVE ROADWAY SIGN	EACH	2.000 X			=	

SUBTOTAL BASE \$

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

CHICAGO ROCKFORD INTERNATIONAL  
WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
CONTRACT NUMBER - R0022

ECMS002 DTGECM03 ECMR003 PAGE 6  
RUN DATE - 07/16/12  
RUN TIME - 084720

\*\*\*\*\* ALT 1 \*\*\*\*\*

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AS108090	1/C #10 XLP-USE	L.F.	3,420.000 X			=	
AS108760	1/C #10 GROUND	L.F.	1,140.000 X			=	
AS110217	1 1/2" STEEL DUCT, DIRECT BURY	L.F.	480.000 X			=	
AS800089	TERMINAL BUILDING MODIFICATIONS	L.S.	1.000 X			=	
AS800098	INFORMATION SIGN	L.S.	1.000 X			=	
AS800178	FIBER OPTIC CABLE	L.F.	1,150.000 X			=	

SUBTOTAL ALT 1 \$

CONTRACT - R0022

SUMMARY OF TOTAL ALTERNATES		
	DOLLARS	CTS
TOTAL BASE	\$	
TOTAL ALT 1	\$	

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

CHICAGO ROCKFORD INTERNATIONAL  
WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
CONTRACT NUMBER - R0022

ECMS002 DTGECM03 ECMR003 PAGE 7  
RUN DATE - 07/16/12  
RUN TIME - 084720

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**

**THE PRECEDING SCHEDULE OF PRICES MUST BE**

**COMPLETED AND RETURNED.**

**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 has 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.

# RETURN WITH BID

## **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, offers, 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.

# RETURN WITH BID

## 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.

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.

### 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.

## RETURN WITH BID

### **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.

## RETURN WITH BID

### **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 50/50-36 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 in the attached document.

## RETURN WITH BID

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

In accordance with the provisions of Section 30-22 (6) of the 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 subcontracted 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.**

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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, 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.

**RETURN WITH BID**

**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: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**N. PA 95-0635 SUBSTANCE ABUSE PREVENTION PROGRAM (SAPP)**

Effective January 1, 2008

This Public Act requires that all contractors and subcontractors have an SAPP, meeting certain requirements, in place **before** starting work.

The contractor must submit their correctly completed SAPP Certification (Form BC 261) prior to issuance of the Notice-to-Proceed. Do not submit your Substance Abuse Prevention Plan (SAPP) with your bid. If you are awarded the contract this form is to be submitted to the Division Construction Engineer at the pre-construction conference.

The requirements of this Public Act are a material part of the contract, and the contractor shall require this provision to be included in all approved subcontracts. The contractor shall submit the correctly completed SAPP Certification Form BC 261 for each subcontractor with the Request for Approval of Subcontractor (Form AER 260-A) prior to issuance of the Notice-to-Proceed.



## RETURN WITH BID

### IV. DISCLOSURES

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

The 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 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 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

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

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. 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? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.) YES \_\_\_\_\_ NO \_\_\_\_\_
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES \_\_\_\_\_ NO \_\_\_\_\_

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

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

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

## RETURN WITH BID

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

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

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

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

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

**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 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)**

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

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

(a) State employment, currently or in the previous 3 years, including contractual employment of services.  
 Yes\_\_\_\_ No\_\_\_\_ If your answer is yes, please answer each of the following questions.

- Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes\_\_\_\_ No\_\_\_\_
- Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, provide the name of the State agency for which you are employed and your annual salary.

\_\_\_\_\_

\_\_\_\_\_

**RETURN WITH BID**

- 3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor? Yes \_\_\_\_\_ No \_\_\_\_\_
- 4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes \_\_\_\_\_ No \_\_\_\_\_

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(b) State employment of spouse, father, mother, son, or daughter, including contractual employment for services in the previous 2 years. Yes \_\_\_\_\_ No \_\_\_\_\_

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

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

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

---

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

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

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(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 \_\_\_\_\_

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

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**RETURN WITH BID**

(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 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): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

Name of person(s): \_\_\_\_\_

Nature of disclosure: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**APPLICABLE STATEMENT**

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

Completed by:  \_\_\_\_\_ Date \_\_\_\_\_  
Signature of Individual or Authorized Officer

**NOT APPLICABLE STATEMENT**

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

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

\_\_\_\_\_ Date \_\_\_\_\_  
Signature of Authorized Officer

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

**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**

<input type="checkbox"/>	<hr style="width: 80%; margin: auto;"/> Signature of Authorized Representative	<hr style="width: 10%; margin: auto;"/> Date
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**OWNERSHIP CERTIFICATION**

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

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

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

## RETURN WITH BID

### SPECIAL NOTICE TO CONTRACTORS

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

#### CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

**RETURN WITH BID**



**Contract No. RO022  
Chicago Rockford International  
Airport  
Rockford, Illinois  
Winnebago County  
Illinois Project No. RFD-4187  
Federal Project No. N/A**

**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:

TOTAL Workforce Projection for Contract												TABLE B CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT				
JOB CATEGORIES	TOTAL EMPLOYEES		MINORITY EMPLOYEES						TRAINEES				TOTAL EMPLOYEES		MINORITY EMPLOYEES	
			BLACK		HISPANIC		*OTHER MINOR.		APPRENTICES		ON THE JOB TRAINEES					
	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																
<b>TOTAL</b>																

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								

<b>FOR DEPARTMENT USE ONLY</b>
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\* Other minorities are defined as Asians (A) or Native Americans (N).  
Please specify race of each employee shown in Other Minorities column.

**Note: See instructions on page 2**



RETURN WITH BID

Contract No. RO022
Chicago Rockford International
Airport
Rockford, Illinois
Winnebago County
Illinois Project No. RFD-4187
Federal Project No. N/A

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

**CERTIFICATIONS REQUIRED BY STATE AND/OR FEDERAL LAW.** The bidder is required by State and/or Federal law to make the below certifications and assurances as a part of the proposal and contract upon award. It is understood by the bidder that the certifications and assurances made herein are a part of the contract.

By signing the Proposal Signature Sheet, the bidder certifies that he/she has read and completed each of the following certifications and assurances, that required responses are true and correct and that the certified signature of the Proposal Signature Sheet constitutes an endorsement and execution of each certification and assurance as though each was individually signed:

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

(a) Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?  
Yes\_\_\_\_\_ No\_\_\_\_\_

(b) If your answer 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\_\_\_\_\_

C. BUY AMERICAN - STEEL FOR CONSTRUCTION CONTRACTS

Any and all steel products used in the performance of this contract by the Contractor, subcontractors, producers, and suppliers are required to adhere to the Illinois Steel Products Procurement Act, which requires that all steel items be of 100 percent domestic origin and manufacture. Any products listed under the Federal Aviation Administration's (FAA) nationwide approved list of "Equipment Meeting Buy American Requirements" shall be deemed as meeting the requirements of the Illinois Steel Products Procurement Act.

D. NPDES CERTIFICATION

In accordance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter I), and the Clean Water Act, and the regulations thereunder, this certification is required for all construction contracts that will result in the disturbance of one or more acres total land area.

The undersigned bidder certifies under penalty of law that he/she understands the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR100000) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

The Airport Owner or its Agent will:

- 1) prepare, sign and submit the Notice of Intent (NOI)
- 2) conduct site inspections and complete and file the inspection reports
- 3) submit Incidence of Non-Compliance (ION) forms
- 4) submit Notice of Termination (NOT) form

Prior to the issuance of the Notice-to-Proceed, for each erosion control measure identified in the Storm Water Pollution Prevention Plan, the contractor or subcontractor responsible for the control measure(s) must sign the above certification (forms to be provided by the Department).

E. NON-APPROPRIATION CLAUSE

By submitting a bid/proposal under this solicitation the offeror certifies that he/she understands that obligations of the State will cease immediately without penalty or further payment being required in any fiscal year the Illinois General Assembly fails to appropriate or otherwise make available sufficient funds for this contract.

F. Contractor is not delinquent in the payment of any debt to the State (or if delinquent has entered into a deferred payment plan to pay the debt), and Contractor acknowledges the contracting state agency may declare the contract void if this certification is false (30 ILCS 500/50-11, effective July 1, 2002).

## RETURN WITH BID

### 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 3, 2012. 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, shown in detail on the plans issued by the Department includes, in general, the following described work:

**East Terminal Parking Lot, Phase 1**
3. **INSTRUCTIONS TO BIDDERS.**
  - (a) This Notice, the invitation for bids, proposal and award shall, together with all other documents in accordance with Article 10-18 of the Illinois Standard Specifications for Construction of Airports, 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 proposal 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.
5. **PRE-BID CONFERENCE.** There will be a pre-bid conference held at N/A at the Chicago Rockford International
6. **Airport administration building.** For engineering information, contact Marc Katz, P.E. of Crawford, Murphy & Tilly, Inc. at (630) 820-1022.
6. **DISADVANTAGED BUSINESS POLICY.** The DBE goal for this contract is 10.0%.
7. **SPECIFICATIONS AND DRAWINGS.** The work shall be done in accordance with the Illinois Standard Specifications for Construction of Airports, the Illinois Division of Aeronautics Supplemental Specifications and Recurring Special Provisions, the Special Provisions dated July 6, 2012 and the Construction Plans dated July 6, 2012 as approved by the Department of Transportation, Division of Aeronautics.
8. **TERMINATION OF CONTRACT.**
  1. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.
  2. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.
  3. If the termination is due to failure to fulfill the Contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the Contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
  4. If, after notice of termination for failure to fulfill contract obligations, it is determined that the Contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.
  5. The rights and remedies of the Sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

## RETURN WITH BID

**9. BIDDING REQUIREMENTS AND BASIS OF AWARD.** When alternates are included in the proposal, the following shall apply:

a. Additive Alternates

- (1) Bidders must submit a bid for the Base Bid and for all Additive Alternates.
- (2) Award of this contract will be made to the lowest responsible qualified bidder computed as follows:

The lowest aggregate amount of (i) the Base Bid plus (ii) any Additive Alternate(s) which the Department elects to award.

The Department may elect not to award any Additive Alternates. In that case, award will be to the lowest responsible qualified bidder of the Base Bid.

b. Optional Alternates

- (1) Bidders must submit a bid for the Base Bid and for either Alternate A or Alternate B or for both Alternate A and Alternate B.
- (2) Award of this contract will be made to the lowest responsible qualified bidder computed as follows:

The lower of the aggregate of either (i) the Base Bid plus Alternate A or (ii) the Base Bid plus Alternate B.

**10. CONTRACT TIME.** The Contractor shall complete all work within the specified contract time. Any calendar day extension beyond the specified contract time must be fully justified, requested by the Contractor in writing, and approved by the Engineer, or be subject to liquidated damages.

The contract time for this contract is 74 calendar days.

**11. INDEPENDENT WEIGHT CHECKS.** The Department reserves the right to conduct random unannounced independent weight checks on any delivery for bituminous, aggregate or other pay item for which the method of measurement for payment is based on weight. The weight checks will be accomplished by selecting, at random, a loaded truck and obtaining a loaded and empty weight on an independent scale. In addition, the department may perform random weight checks by obtaining loaded and empty truck weights on portable scales operated by department personnel.

**12. GOOD FAITH COMPLIANCE.** The Illinois Department of Transportation has made a good faith effort to include all statements, requirements, and other language required by federal and state law and by various offices within federal and state governments whether that language is required by law or not. If anything of this nature has been left out or if additional language etc. is later required, the bidder/contractor shall cooperate fully with the Department to modify the contract or bid documents to correct the deficiency. If the change results in increased operational costs, the Department shall reimburse the contractor for such costs as it may find to be reasonable.

**RETURN WITH BID**

**Contract No. R0022  
Chicago Rockford International  
Airport  
Rockford, Illinois  
Winnebago County  
Illinois Project No. RFD-4187  
Federal Project No. N/A**

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 4 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 \_\_\_\_\_

(IF A CORPORATION) Signature of Authorized Representative \_\_\_\_\_

Typed or printed name and title of Authorized Representative \_\_\_\_\_

(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW) Attest \_\_\_\_\_

Signature \_\_\_\_\_

Business Address \_\_\_\_\_

\_\_\_\_\_

Corporate Name \_\_\_\_\_

By \_\_\_\_\_

(IF A JOINT VENTURE) Signature of Authorized Representative \_\_\_\_\_

Typed or printed name and title of Authorized Representative \_\_\_\_\_

Attest \_\_\_\_\_

Signature \_\_\_\_\_

Business Address \_\_\_\_\_

\_\_\_\_\_

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



Sponsor \_\_\_\_\_ Item No. \_\_\_\_\_

IL Proj. No. \_\_\_\_\_ AIP Proj. 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 SPONSOR identified above, in the penal sum of 5 percent of the total bid price, or for the amount specified in Section 6, Proposal Guarantee of the Proposal Document, whichever is the lesser sum, well and truly to be paid unto said SPONSOR, 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 SPONSOR through its AGENT, the State of Illinois, Department of Transportation, Division of Aeronautics, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above.

NOW, THEREFORE, if the SPONSOR through its AGENT shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, and as specified in the bidding and contract documents, submit a DBE Utilization Plan that is accepted and approved by the AGENT; and if, after the award by AGENT on behalf of SPONSOR, 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 SPONSOR the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the SPONSOR 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 SPONSOR acting through its AGENT 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 SPONSOR within fifteen (15) days of written demand therefor. If SURETY does not make full payment within such period of time, the AGENT may bring an action to collect the amount owed. SURETY is liable to the SPONSOR and to the AGENT for all its expenses, including attorney's fees, incurred in any litigation in which SPONSOR or AGENT prevail 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 \_\_\_\_\_ 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 SPONSOR through its AGENT under the conditions of the bid bond as shown above.

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



**(1) Policy**

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

**(2) Obligation**

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

**(3) Project and Bid Identification**

Complete the following information concerning the project and bid:

Route Chicago Rockford International

Section \_\_\_\_\_

Project RFD-4187

County Winnebago County

Letting Date August 3, 2012

Contract No. RO022

Letting Item No. 4A

Total Bid \_\_\_\_\_

Contract DBE Goal 10.0% \_\_\_\_\_

(Percent) (Dollar Amount)

**(4) Assurance**

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

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

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

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

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

\_\_\_\_\_  
Company

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

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

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

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

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.



Subcontractor Registration \_\_\_\_\_

Letting August 3, 2012

**Participation Statement**

Item No. 4A

(1) Instructions

Contract RO022

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

\_\_\_\_\_  
Signature for Prime Contractor

\_\_\_\_\_  
Signature for DBE Firm

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Contact \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

Phone \_\_\_\_\_

Firm Name \_\_\_\_\_

Firm Name \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

City/State/Zip \_\_\_\_\_

E \_\_\_\_\_

WC \_\_\_\_\_

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





# 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. RO022  
Chicago Rockford International  
Airport  
Rockford, Illinois  
Winnebago County  
Illinois Project No. RFD-4187  
Federal Project No. N/A**



**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 Section 60-01 of the Illinois Standard Specifications for Construction of Airports.

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

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

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

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

## RETURN WITH SUBCONTRACT

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

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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

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

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the 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



**RETURN WITH SUBCONTRACT**

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 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the 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 2 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 \_\_\_\_\_

**RETURN WITH SUBCONTRACT**

(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 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): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**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

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the 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 box with fields: Signature of Authorized Officer, Date

OWNERSHIP CERTIFICATION

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

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

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

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

APPENDIX A

The following goal for female utilization in each construction craft and trade shall apply to all Contractors holding Federal and federally assisted construction contracts and subcontracts in excess of \$10,000. The goal is applicable to the Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or nonfederally related construction contract or subcontract.

AREA COVERED (STATEWIDE)

Goals for Women apply nationwide.

GOAL

	Goal (percent)
Female Utilization.....	6.9

APPENDIX B

Until further notice, the following goals for minority utilization in each construction craft and trade shall apply to all Contractors holding Federal and federally-assisted construction contracts and subcontracts in excess of \$10,000. to be performed in the respective geographical areas. The goals are applicable to the Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally-assisted or nonfederally related construction contract or subcontract.

<u>Economic Area</u>	<u>Goal (percent)</u>
056 Paducah, KY: Non-SMSA Counties - IL - Hardin, Massac, Pope KY - Ballard, Caldwell, Calloway, Carlisle, Crittenden, Fulton, Graves, Hickman, Livingston, Lyon, McCracken, Marshall	5.2
080 Evansville, IN: Non-SMSA Counties - IL - Edwards, Gallatin, Hamilton, Lawrence, Saline, Wabash, White IN - Dubois, Knox, Perry, Pike, Spencer KY - Hancock, Hopkins, McLean, Mublenberg, Ohio, Union, Webster	3.5
081 Terre Haute, IN: Non-SMSA Counties - IL - Clark, Crawford IN - Parke	2.5
083 Chicago, IL: SMSA Counties: 1600 Chicago, IL - IL - Cook, DuPage, Kane, Lake, McHenry, Will 3740 Kankakee, IL - IL - Kankakee	19.6  9.1

<u>Economic Area</u>	<u>Goal (percent)</u>
Non-SMSA Counties IL - Bureau, DeKalb, Grundy, Iroquois, Kendall, LaSalle, Livingston, Putnam IN - Jasper, Laporte, Newton, Pulaski, Starke	18.4
084 Champaign - Urbana, IL: SMSA Counties: 1400 Champaign - Urbana - Rantoul, IL - IL - Champaign	7.8
Non-SMSA Counties - IL - Coles, Cumberland, Douglas, Edgar, Ford, Piatt, Vermilion	4.8
085 Springfield - Decatur, IL: SMSA Counties: 2040 Decatur, IL - IL - Macon	7.6
7880 Springfield, IL - IL - Mendard, Sangamon	4.5
Non-SMSA Counties IL - Cass, Christian, Dewitt, Logan, Morgan, Moultrie, Scott, Shelby	4.0
086 Quincy, IL: Non-SMSA Counties	3.1
IL - Adams, Brown, Pike MO - Lewis, Marion, Pike, Ralls	
087 Peoria, IL: SMSA Counties: 1040 Bloomington - Normal, IL - IL - McLean	2.5
6120 Peoria, IL - IL - Peoria, Tazewell, Woodford	4.4
Non-SMSA Counties - IL - Fulton, Knox, McDonough, Marshall, Mason, Schuyler, Stark, Warren	3.3
088 Rockford, IL: SMSA Counties: 6880 Rockford, IL - IL - Boone, Winnebago	6.3
Non-SMSA Counties - IL - Lee, Ogle, Stephenson	4.6
098 Dubuque, IA: Non-SMSA Counties - IL - JoDaviess IA - Atlamakee, Clayton, Delaware, Jackson, Winnesheik WI - Crawford, Grant, Lafayette	0.5
099 Davenport, Rock Island, Moline, IA - IL: SMSA Counties: 1960 Davenport, Rock Island, Moline, IA - IL - IL - Henry, Rock Island IA - Scott	4.6
Non-SMSA Counties - IL - Carroll, Hancock, Henderson, Mercer, Whiteside IA - Clinton, DesMoines, Henry, Lee, Louisa, Muscatine MO - Clark	3.4

APPENDIX B (CONTINUED)

<u>Economic Area</u>	<u>Goal (percent)</u>
107 St. Louis, MO:	
SMSA Counties:	
7040 St. Louis, MO - IL -	14.7
IL - Clinton, Madison, Monroe, St. Clair	
MO - Franklin, Jefferson, St. Charles, St. Louis, St. Louis City	
Non-SMSA Counties -	11.4
IL - Alexander, Bond, Calhoun, Clay, Effingham, Fayette, Franklin, Greene, Jackson, Jasper, Jefferson, Jersey, Johnson, Macoupin, Marion, Montgomery, Perry, Pulaski, Randolph, Richland, Union, Washington, Wayne, Williamson	
MO - Bollinger, Butler, Cape Girardeau, Carter, Crawford, Dent, Gasconade, Iron, Lincoln, Madison, Maries, Mississippi, Montgomery, Perry, Phelps, Reynolds, Ripley, St. Francois, St. Genevieve, Scott, Stoddard, Warren, Washington, Wayne	

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the provisions and specifications set forth in its federally assisted contracts, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Illinois Division of Aeronautics will provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction contract and/or subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. This notification will list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the entire State of Illinois for the goal set forth in APPENDIX A and the county or counties in which the work is located for the goals set forth in APPENDIX B.

## **DISADVANTAGED BUSINESS POLICY**

**NOTICE:** This proposal contains the special provision entitled "Disadvantaged Business Participation." Inclusion of this Special Provision in this contract satisfies the obligations of the Department of Transportation under federal law as implemented by 49 CFR 23 and under the Illinois "Minority and Female Business Enterprise Act."

**POLICY:** It is public policy that the businesses defined in 49 CFR Part 23 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with State or Federal funds. Consequently, the requirements of 49 CFR Part 23 apply to this contract.

**OBLIGATION:** The Contractor agrees to ensure that the businesses defined in 49 CFR Part 23 have the maximum opportunity to participate in the performance of this contract. In this regard, the Contractor shall take all necessary and reasonable steps, in accordance with 49 CFR Part 23, to ensure that the said businesses have the maximum opportunity to compete for and perform portions of this contract. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

The Contractor shall include the above Policy and Obligation statements of this Special Provision in every subcontract, including procurement of materials and leases of equipment.

**DBE/WBE CONTRACTOR FINANCE PROGRAM:** On contracts where a loan has been obtained through the DBE/WBE Contractor Finance Program, the Contractor shall cooperate with the Department by making all payments due to the DBE/WBE Contractor by means of a two-payee check payable to the Lender (Bank) and the Borrower (DBE/WBE Contractor).

**BREACH OF CONTRACT:** Failure to carry out the requirements set forth above and in the Special Provision shall constitute a breach of contract and may result in termination of the contract or liquidated damages as provided in the special provision.

## **DISADVANTAGED BUSINESS ENTERPRISES**

Contract Assurance (§26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

## **CIVIL RIGHTS ACT OF 1964, TITLE VI – CONTRACTOR CONTRACTUAL REQUIREMENTS**

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

**1.1 Compliance with Regulations.** The contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

**1.2 Nondiscrimination.** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

**1.3 Solicitations for Subcontracts, Including Procurements of Materials and Equipment.** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

**1.4 Information and Reports.** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the sponsor or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.

1.5 Sanctions for Noncompliance. In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:

- a. Withholding of payments to the contractor under the contract until the contractor complies, and/or
- b. Cancellation, termination, or suspension of the contract, in whole or in part.

1.6 Incorporation of Provisions. The contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the sponsor or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

## **CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS**

### (1) 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 and trainees described in paragraphs 5 and 6 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.

### (2) Violations: Liability for Unpaid Wages; Liquidated Damages:

In the event of any violation of the clause set forth in paragraph (1) above, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in 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, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) above, in the sum of \$10.00 for each calendar day on which such employee was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in paragraph (1) above.

### (3) Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) above.

### (4) Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

### (5) Working Conditions.

No Contractor or subcontractor may require any laborer or mechanic employed in the performance of any contract to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards (29 CFR 1926) issued by Department of Labor.



## EQUAL EMPLOYMENT OPPORTUNITY SPECIFICATION

1. As used in these specifications:
  - a) "Covered area" means the geographical area described in the solicitation from which this contract resulted;
  - b) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
  - c) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
  - d) "Minority" includes:
    - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
    - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
    - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
    - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000. the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
  - a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working as such sites or in such facilities.

- b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractors may have taken.
- d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreements; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

- o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
  - p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a Contractor association, joint Contractor-union, Contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specified minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy his requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

ILLINOIS DEPARTMENT OF TRANSPORTATION - DIVISION OF AERONAUTICS

**STATE REQUIRED CONTRACT PROVISIONS**

**SPECIAL PROVISION FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION**

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. This 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 **10.0%** 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 forth 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 web site at [www.dot.il.gov](http://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 name and address of DBE firms that will participate in the contract;
  - (2) A description, including pay item numbers, of the work each DBE will perform;
  - (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
  - (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
  - (5) If the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
  - (6) If the contract goal is not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURE. 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 the 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 commits 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 commit 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 and 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 why good faith efforts have not been found.

(c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after 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 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 reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

**CALCULATING DBE PARTICIPATION.** The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.

- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
  - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
  - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
  - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
  - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement.

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.
- (b) TERMINATION OR REPLACEMENT. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.
- (c) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontractor, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

- (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
- (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
- (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonably 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 to CFR Parts 180, 215 and 1200 or applicable state law;
- (6) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE 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 DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

- (g) **ENFORCEMENT.** The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (h) **RECONSIDERATION.** Notwithstanding any other provision of the contract, including but not limited to Article 50-17 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

## **SPECIAL PROVISION FOR SUBCONTRACTOR MOBILIZATION PAYMENTS**

**Revised: April 1, 2011**

To account for the preparatory work and the 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 Section 60-01 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 AER 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

## **SPECIAL PROVISION FOR PAYMENTS TO SUBCONTRACTORS**

**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 90-07 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.

**SPECIAL PROVISION FOR SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY  
RESPONSIBILITIES NONFEDERAL-AID CONTRACTS  
Revised: January 1, 1994**

1. General

- a. The requirements set forth herein shall constitute the specific affirmative action requirements under this contract and supplement the non-discrimination requirements contained elsewhere in this proposal.
- b. The Contractor shall work with the Illinois Department of Transportation (IDOT) in carrying out Equal Employment Opportunity (EEO) obligations and in reviews of activities under the contract.
- c. The Contractor, and all subcontractors holding subcontracts (not including material suppliers) of \$10,000 or more, shall comply with the following minimum specific requirement activities of EEO. The Contractor shall include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy

The Contractor shall accept as operating policy the following statement which is designed to further the provision of EEO to all persons, and to promote the full realization of equal employment opportunity through a positive continuing program: "It is the policy of this Company to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age, or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

3. Equal Employment Opportunity Officer

The Contractor shall designate and make known to IDOT contracting officers an EEO Officer who will have the responsibility for and 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.

4. Dissemination of Policy

- a. 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:
  - (1) 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.
  - (2) 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.
  - (3) 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 and female employees.

- b. In order to make the Contractor's EEO policy known to all employees, prospective employees, and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor shall take the following actions:
  - (1) 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.
  - (2) The Contractor's EEO policy and the procedures to implement such policy shall be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

- a. When advertising for employees, the Contractor shall include in all advertisements for employees the notation: "An Equal Opportunity Employer". All such advertisements shall be published in newspapers, or other publications, having a large circulation among minority groups in the area from which the project work force would normally be derived.
- b. The Contractor shall, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges and minority and female organizations. To meet this requirement, the Contractor shall, identify sources of potential minority and female employees, and establish with such identified sources procedures whereby minority and female applicants may be referred to the Contractor for employment consideration. In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he/she is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with EEO contract provisions.
- c. The Contractor shall encourage present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority and female applicants shall be discussed with employees.

6. 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, will be taken without regard to race, color, religion, sex, national origin, age, or disability. The following procedures shall be followed:

- a. The Contractor shall 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 shall periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The Contractor shall periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor shall 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 shall promptly investigate all complaints of alleged discrimination made to the Contractor in connection with the obligations under this contract, shall attempt to resolve such complaints, and shall 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 shall inform every complainant of all of the avenues of appeal.

7. Training and Promotion

- a. The Contractor shall assist in locating, qualifying and increasing the skills of minority and female 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.
- c. The Contractor shall advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The Contractor shall periodically review the training and promotion potential of minority and female employees and shall encourage eligible employees to apply for such training and promotion.

8. Unions

If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor shall use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minorities and females 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, shall include the procedures set forth below:

- a. The Contractor shall use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority and female employees for membership in the unions and increasing the skills of minority and female and employees so that they may qualify for higher paying employment.
- b. The Contractor shall use best efforts to incorporate an EEO clause into each union agreement to the end that such union shall 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 IDOT 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 female referrals within the time limit set forth in the collective bargaining agreement, the Contractor shall, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and females. (The U.S. Department of Labor 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 minorities or female employees). In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to these Special Provisions, such Contractor shall immediately notify IDOT.

9. Selection of Subcontractors, Procurement of Materials, and Leasing of Equipment

The Contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

- 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 Part 23, shall have equal opportunity to compete for and perform subcontracts which the Contractor enters into pursuant to this contract. The Contractor shall use best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority and female representation among their employees. Contractors shall obtain lists of DBE construction firms from IDOT personnel.
- c. The Contractor shall use his/her best efforts to ensure subcontractor compliance with their EEO obligations.

10. 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 IDOT.

- a. The records kept by the Contractor shall document the following:
  - (1) the number of minorities, non-minorities and females 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 females;
  - (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 Contractor shall submit to IDOT a monthly report every month for the duration of the project, indicating the number of minority, non-minority and female employees currently engaged in each work classification required by contract work and the number of hours worked. This information is to be reported on Form SBE-956. If on-the-job training is being required by special provision, the Contractor will be required to collect and report training data.

## **SPECIAL PROVISION FOR REQUIRED PROVISIONS - STATE CONTRACTS**

**Revised: January 1, 2012**

### **I. SELECTION OF LABOR**

The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

#### **EMPLOYMENT OF ILLINOIS WORKERS DURING PERIODS OF EXCESSIVE UNEMPLOYMENT**

Whenever there is a period of excessive unemployment in Illinois, which is defined herein as any month immediately following two consecutive calendar months during which the level of unemployment in the State of Illinois has exceeded five percent as measured by the United States Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ at least 90 percent Illinois laborers. "Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident.

Other laborers may be used when Illinois laborers as defined herein are not available, or are incapable of performing the particular type of work involved, if so certified by the Contractor and approved by the Engineer. The Contractor may place no more than three of his/her regularly employed non-resident executive and technical experts, who do not qualify as Illinois laborers, to do work encompassed by this Contract during period of excessive unemployment.

This provision applies to all labor, whether skilled, semi-skilled, or unskilled, whether manual or non-manual.

### **II. EQUAL EMPLOYMENT OPPORTUNITY**

In the event of the Contractor's noncompliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Illinois Department of Human Rights Rules and Regulations, the Contractor may be declared ineligible for future Contracts or subcontracts with the State of Illinois or any of its political sub-divisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this contract, the Contractor agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
2. That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.
4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.
5. That it will submit reports as required by the Illinois Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

6. That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
7. That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply therewith. In addition, the Contractor will not utilize any subcontractor declared by the Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

### III. SUBLETTING OR ASSIGNING THE CONTRACT

1. The Contractor shall perform with his/her own organization contract work amounting to not less than 51 percent of the original total contract price, except that any items designated by the State as "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the original total contract price before computing the amount of work required to be performed by the Contractor with his/her own organization.
  - a. "His/her own organization" shall be construed to include only worker employed and paid directly by the Contractor and equipment owned or rented by him/her, with or without operators.
  - b. "Specialty Items" shall be construed to be limited to work that requires specialized knowledge, craftsmanship or equipment not ordinarily available in contracting organizations qualified to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.
2. In addition to the 51 percent requirement set forth in paragraph 1 above, the Contractor shall furnish (a) a competent superintendent or foreman who is employed by him/her, who has full authority to direct performance of the work in accordance with the contract requirements, and who is in charge of all construction operations (regardless of who performs the work), and (b) such other of his/her own organizational capability and responsibility (supervision, management, and engineering services) as the State highway department contracting officer determines is necessary to assure the performance of the contract.
3. The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of the contract or contracts or any portion thereof, or of his/her right, title or interest therein, without written consent of the Engineer. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with the Contractor's own organization, work amounting to not less than 51 percent of the total contract cost, except that any items designated in the contract as "specialty items" may be performed by subcontract and the cost of any such specialty items so performed by subcontract may be deducted from the total cost before computing the amount of work required to be performed by the Contractor with his/her own organization. Materials purchased or produced by the Contractor must be incorporated into the project by the Contractor's own organization if their cost is to be applied to the 50 percent requirement.

No subcontracts, or transfer of contract, shall in any case release the Contractor of his/her liability under the contract and bonds. All transactions of the Engineer shall be with the Contractor. The Contractor shall have representative on the job at all times when either contract or subcontract work is being performed.

All requests to subcontract shall contain a certification that the subcontract agreement exists in writing and physically contains the required Federal and State Equal Employment Opportunity provisions and Labor compliance provisions, including the contract minimum wage requirements. The Contractor shall permit Department or Federal representatives to examine the subcontract agreements upon notice.

4. Any items that have been selected as "Specialty Items" for the contract are listed as such in the Special Provisions, bid schedule, or elsewhere in the contract documents.
5. No portion of the contract shall be sublet, assigned or otherwise disposed of, except with the written consent of the State highway department contracting officer, or his/her authorized representative, and such consent when given shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract. Request for permission to sublet, assign or otherwise dispose of any portion of the contract shall be in writing and accompanied by (a) a showing that the organization which will perform the work is particularly experienced and equipped for such work, and (b) an assurance by the Contractor that the labor standards provisions set forth in this contract shall apply to labor performed on all work encompassed by the request.

### IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

1. Prevailing Wages. All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or

ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.

2. Payroll Records. The Contractor and each subcontractor shall make and keep, for a period of three years from the later of the date of final payment under the contract or completion of this contract, records of the wages paid to his/her workers. The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid. Upon two business days' notice, these records shall be available, at all reasonable hours at a location within the State, for inspection by the Department or the Department of Labor.
3. Submission of Payroll Records. The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor, or an officer, employee or officer thereof, which avers that: (i) he or she has examined the records and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class A misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor.

#### V. NONSEGREGATED FACILITIES

(Applicable to State Financed Construction Contracts and related subcontracts exceeding \$10,000 which are not exempt from the Equal Opportunity clause).

By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement, as appropriate, the bidder, construction Contractor, subcontractor, or material supplier, as appropriate, certifies that (s)he does not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that (s)he does not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. (S)He certifies further that (s)he will not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that (s)he will not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. (S)He agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, 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, creed, color, or national origin, because of habit, local custom, or otherwise. (S)He agrees that (except where he/she has obtained identical certifications from proposed subcontractors and material suppliers for specific time periods), he/she will obtain identical certifications from proposed subcontractors or material suppliers prior to the award of subcontracts or the consummation of material supply agreements, exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that (s)he will retain such certifications in his/her files.

# CONSTRUCTION CONTRACT PROCUREMENT POLICIES

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## SECTION 1

### PROPOSAL REQUIREMENTS AND CONDITIONS

1-01 ADVERTISEMENT (Notice to Bidders). The State of Illinois shall publish the advertisement at such places and at such times as are required by local law or ordinances. The published advertisement shall state the time and place for submitting sealed proposals; a description of the proposed work; instructions to bidders as to obtaining proposal forms, plans, and specifications; proposal guaranty required; and the Owner's right to reject any and all bids.

For Federally assisted contracts the advertisement shall conform to the requirements of local laws and ordinances pertaining to letting of contracts and, in addition, shall conform to the requirements of the appropriate parts of the Federal Aviation Regulations applicable to the particular contract being advertised.

#### 1-02 PREQUALIFICATION OF BIDDERS

- (a) When the awarding authority is the State of Illinois, each prospective bidder, prior to being considered for issuance of any proposal forms will be required to file, on forms furnished by the Department, an experience questionnaire and a confidential financial statement in accordance with the Department's Instructions for Prequalification of Contractors. The Statement shall include a complete report of the prospective bidder's financial resources and liabilities, equipment, past record and personnel, and must be submitted at least thirty (30) days prior to the scheduled opening of bids in which the Contractor is interested.

After the Department has analyzed the submitted "Contractor's Statement of Experience and Financial Condition" and related information and has determined appropriate ratings, the Department will issue to the Contractor a "Certificate of Eligibility". The Certificate will permit the Contractor to obtain proposal forms and plans for any Department of Transportation letting on work which is within the limits of the Contractor's potential as indicated on his "Certificate of Eligibility", subject to any limitations due to present work under contract or pending award as determined from the Contractor's submitted "Affidavit of Availability". Bidders intending to consistently submit proposals shall submit a "Contractor's Statement of Experience and Financial Condition" at least once a year. However, prequalification may be changed during that period upon the submission of additional favorable reports or upon reports of unsatisfactory performance.

Before a proposal is issued, the prospective bidder will be required to furnish an "Affidavit of Availability" indicating the location and amount of all uncompleted work under contract, or pending award, either as principal or subcontractor, as well as a listing of all subcontractors and value of work sublet to others. The prospective bidder may be requested to file a statement showing the amount and condition of equipment which will be available.

Before an award is made, the bidder may be required to furnish an outline of his plans for conducting the work.

- (b) When the awarding authority for contract construction work is the County Board of a county; the Council, the City Council, or the President and Board of Trustees of a city, village or town, each prospective bidder, in evidence of his competence, shall furnish the awarding authority as a prerequisite to the release of proposal forms by the awarding authority, a certified or photostatic copy of a "Certificate of Eligibility" issued by the Department of Transportation, in accordance with Section 1-02(a).

The two low bidders must file within 24 hours after the letting a sworn affidavit, in triplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work, using the blank form made available for this affidavit. One copy shall be filed with the awarding authority and two copies with the District Highway Office.

1-03 CONTENTS OF PROPOSAL FORMS. Upon request, the Department will furnish the prequalified bidders a proposal form. This form will state the location and description of the contemplated construction and will show the estimate of the various quantities and kinds of work to be performed or materials to be furnished, and will have a schedule of items for which unit bid prices are invited. The proposal form will state the time in which work must be completed, the amount of the proposal guaranty, labor requirements, and date, time and place of the opening of proposals. The form will also include any special provisions or requirements which vary from or are not contained in these specifications.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. Any addenda officially issued by the Department, will be considered a part of the proposal whether attached or not.

For Federally assisted contracts, the proposal shall conform to the requirements of local laws and ordinances pertaining to letting of contracts and, in addition, shall conform to the requirements of the appropriate parts of the Federal Aviation Regulations pertaining to the particular contract being let.

1-04 ISSUANCE OF PROPOSAL FORMS. The Department shall refuse to issue a proposal form for any of the following reasons:

- (a) Lack of competency and adequate machinery, plant and other equipment, as revealed by the financial statement and experience questionnaires required under Section 1-02(a).
- (b) Uncompleted work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded.
- (c) False information provided on a bidder's "Affidavit of Availability".
- (d) Failure to pay, or satisfactorily settle, all bills due for labor and material on former contracts in force at the time of issuance of proposal forms.
- (e) Failure to comply with any prequalification regulations of the Department.
- (f) Default under previous contracts.
- (g) Unsatisfactory performance record as shown by past work for the Department, judged from the standpoint of workmanship and progress.
- (h) When the Contractor is suspended from eligibility to bid at a public letting where the contract is awarded by, or require approval of, the Department.
- (i) When any agent, servant, or employee of the prospective bidder currently serves as a member, employee, or agent of a governmental body that is financially involved in the proposed work.
- (j) When any agent, servant, or employee of the prospective bidder has participated in the preparation of plans or specifications for the proposed work.

1-05 INTERPRETATION OF QUANTITIES IN BID SCHEDULE. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly or by implication agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 20 of the Illinois Standard Specifications for Construction of Airports without in any way invalidating the unit bid prices.

1-06 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. He shall satisfy himself as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs, underground utilities and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which he may make or obtain from his examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

1-07 PREPARATION OF THE PROPOSAL. The bidder shall submit his proposal on the form furnished by the Department. The proposal shall be executed properly, and bids shall be made for all items indicated in the proposal form, except that when alternate bids are asked, a bid on more than one alternate for each item is not required, unless otherwise provided. The bidder shall indicate, in figures, a unit price for each of the separate items called for in the proposal; he shall show the products of the respective quantities and unit prices in the column provided for that purpose, and the gross sum shown in the place indicated in the proposal shall be the summation of said products. All writing shall be with ink or typewriter, except the signature of the bidder which shall be written with ink.

If the proposal is made by an individual, his name and business address shall be shown. If made by a firm or partnership, the name and business address of each member of the firm or partnership shall be shown. If made by a corporation, the proposal shall show the names, titles, and business address of the president, secretary, and treasurer, and the seal of the corporation shall be affixed and attested by the secretary.

The proposal shall be issued to a prequalified bidder in the same name and style as the financial statement used for prequalification and shall be submitted in like manner.

1-08 REJECTION OF PROPOSALS. The Department reserves the right to reject proposals for any of the conditions in Article 1-04 or for any of the following reasons:

- (a) More than one proposal for the same work from an individual, firm, partnership, or corporation under the same or different names.
- (b) Evidence of collusion among bidders.
- (c) Unbalanced proposals in which the prices for some items are obviously out of proportion to the prices for other items.
- (d) If the proposal does not contain a unit price for each pay item listed except in the case of authorized alternate pay items or lump sum pay items.

- (e) If the proposal is other than that furnished by the Department; or if the form is altered or any part thereof is detached.
- (f) If there are omissions, erasures, alterations, unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.
- (g) If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- (h) If the proposal is not accompanied by the proper proposal guaranty.
- (i) If the proposal is prepared with other than ink or typewriter.
- (j) If the proposal is submitted in any other name other than that to whom it was issued by the Department.

1-09 PROPOSAL GUARANTY. Each Proposal shall be accompanied by either a bid bond on the Department of Transportation, Division of Aeronautics form contained in the proposal, executed by a corporate surety company satisfactory to the Department or by a bank cashier's check or a properly certified check for not less than 5 percent of the amount bid.

Bank cashier's checks, or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois.

1-10 DELIVERY OF PROPOSALS. Each proposal should be submitted in a special envelope furnished by the Department. The blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Department is used, it shall be of the same general size and shape and be similarly marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Department at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and place specified in the Notice to Bidders. Proposals received after the time for opening of bids will be returned to the bidder unopened.

1-11 WITHDRAWAL OF PROPOSALS. Permission will be given a bidder to withdraw a proposal if he makes his request in writing or by telegram before the time for opening proposals. If a proposal is withdrawn, the bidder will not be permitted to resubmit this proposal at the same letting. With the approval of the Engineer, a bidder may withdraw a proposal and substitute a new proposal prior to the time of opening bids.

1-12 PUBLIC OPENING OF PROPOSALS. Proposals will be opened and read publicly at the time and place specified in the Notice to Bidders. Bidders, their authorized agents, and other interested parties are invited to be present.

1-13 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

- (a) Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- (b) Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner.
- (c) If the bidder is considered to be in "default" for any reason specified in the Subsection 1-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

1-14 WORKER'S COMPENSATION INSURANCE. Prior to the approval of his contract by the Division, the Contractor shall furnish to the Division certificates of insurance covering Worker's Compensation, or satisfactory evidence that this liability is otherwise taken care of in accordance with Section 4.(a) of the "Worker's Compensation Act of the State of Illinois" as amended.

Such insurance, or other means of protection as herein provided, shall be kept in force until all work to be performed under the terms of the contract has been completed and accepted in accordance with the specifications, and it is hereby understood and agreed that the maintenance of such insurance or other protection, until acceptance of the work by the Division is a part of the contract. Failure to maintain such insurance, cancellation by the Industrial Commission of its approval of such other means of protection as might have been elected, or any other act which results in lack of protection under the said "Workers' Compensation Act" may be considered as a breach of the contract.

## SECTION 2

### AWARD AND EXECUTION OF CONTRACT

2-01 CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. In the event of a discrepancy between unit bid prices and extensions, the unit bid price shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

- (a) If the proposal is irregular as specified in the subsection titled REJECTION OF PROPOSALS of Section 1.
- (b) If the bidder is disqualified for any of the reasons specified in the subsection titled DISQUALIFICATION OF BIDDERS of Section 1.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals; waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable State and Local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise.

2-02 AWARD OF CONTRACT. The award of contract will be made within 60 calendar days after the opening of proposals to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by letter, that his bid has been accepted, and that he has been awarded the contract.

If a contract is not awarded within 60 days after the opening of proposals, a bidder may file a written request with the Division for the withdrawal of his bid and the Division will permit such withdrawal.

For Federally assisted contracts, unless otherwise specified in this subsection, no award shall be made until the Division has concurred in the Owner's recommendation to make such award and has approved the Owner's proposal contract to the extent that such concurrence and approval are required by Federal Regulations.

2-03 CANCELLATION OF AWARD. The Division reserves the right to cancel the award without liability to the bidder at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection titled APPROVAL OF CONTRACT of this section. The Division at the time of cancellation will return the proposal guaranty.

2-04 RETURN OF PROPOSAL GUARANTY. The proposal guaranties of all except the two lowest bidders will be returned promptly after the proposals have been checked, tabulated, and the relation of the proposals established. Proposal guaranties of the two lowest bidders will be returned as soon as the Construction Contract, Performance Bonds, and Payment Bonds of the successful bidder have been properly executed and approved.

If any other form of proposal guaranty is used, other than a bid bond, a bid bond may be substituted at the Contractor's option.

2-05 REQUIREMENT OF PERFORMANCE AND PAYMENT BONDS. The successful bidder for a contract, at the time of the execution of the contract, shall deposit with the Division separate performance and payment bonds each for the full amount of the contract. The form of the bonds shall be that furnished by the Division, and the sureties shall be acceptable to the Division.

2-06 EXECUTION OF CONTRACT. The successful bidder shall sign (execute) the Contract and shall return the signed Contract to the Owner (Sponsor) for signature (execution) and subsequently return all copies to the Division. The fully executed surety bonds specified in the subsection title REQUIREMENTS OF PERFORMANCE AND PAYMENT BONDS of this section will be forwarded to the Division within 15 days of the date mailed or otherwise delivered to the successful bidder. If the Contract and Bonds are mailed, special handling is recommended.

If the bidder to whom award is to be made is a corporation organized under the laws of a State other than Illinois, the bidder shall furnish the Division a copy of the corporation's certificate of authority to do business in the State of Illinois, or provide evidence of the same, with the return of the executed contract and bond. Failure to furnish such evidence of a certificate of authority within the time required will be considered as just cause for the annulment of the award and the forfeiture of the proposal guaranty to the State, not as a penalty, but in payment of liquidated damages sustained as a result of such failure.

2-07 APPROVAL OF CONTRACT. Upon receipt of the contract and bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the contract to the Division for approval and execution by the Division. Delivery of the fully executed contract to the Contractor shall constitute the Department's approval to be bound by the successful bidder's proposal and the terms of the contract.

2-08 FAILURE TO EXECUTE CONTRACT. If the contract is not executed by the Division within 15 days following receipt from the bidder of the properly executed contracts and bonds, the bidder shall have the right to withdraw his bid without penalty.

Failure of the successful bidder to execute the contract and file acceptable bonds within 15 days after the contract has been mailed to him shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of the State, not as a penalty, but as liquidation of damages sustained.

**ILLINOIS DEPARTMENT OF LABOR**

**PREVAILING WAGES FOR  
WINNEBAGO COUNTY,  
EFFECTIVE JULY, 2012**

The Prevailing rates of wages are included in this Contract proposal. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and this Proposal, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at <http://www.state.il.us/agency/idol/> or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.

# Winnebago County Prevailing Wage for July 2012

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
=====	==	===	=	=====	=====	=====	=====	=====	=====	=====	=====	=====
ASBESTOS ABT-GEN		BLD		29.580	30.580	1.5	1.5	2.0	8.240	12.32	0.000	0.800
ASBESTOS ABT-MEC		BLD		18.950	0.000	1.5	1.5	2.0	2.700	3.350	0.000	0.000
BOILERMAKER		BLD		43.450	47.360	2.0	2.0	2.0	6.970	14.66	0.000	0.350
BRICK MASON		BLD		35.880	38.630	1.5	1.5	2.0	7.950	11.73	0.000	0.600
CARPENTER		BLD		36.320	40.320	1.5	1.5	2.0	7.400	10.95	0.000	0.600
CARPENTER		HWY		37.280	39.030	1.5	1.5	2.0	7.400	9.000	0.000	0.490
CEMENT MASON		ALL		34.820	37.570	1.5	1.5	2.0	8.150	11.45	0.000	0.500
CERAMIC TILE FNSHER		BLD		32.410	0.000	1.5	1.5	2.0	7.700	4.840	0.000	0.530
COMMUNICATION TECH		BLD		36.000	39.600	1.5	1.5	2.0	10.14	11.20	0.000	0.720
ELECTRIC PWR EQMT OP		ALL		35.400	48.110	1.5	1.5	2.0	5.000	10.97	0.000	0.270
ELECTRIC PWR GRNDMAN		ALL		27.380	48.110	1.5	1.5	2.0	5.000	8.490	0.000	0.210
ELECTRIC PWR LINEMAN		ALL		42.390	48.110	1.5	1.5	2.0	5.000	13.14	0.000	0.320
ELECTRIC PWR TRK DRV		ALL		28.350	48.110	1.5	1.5	2.0	5.000	8.790	0.000	0.220
ELECTRICIAN		BLD		40.000	44.000	1.5	1.5	2.0	10.14	16.93	0.000	0.800
ELEVATOR CONSTRUCTOR		BLD		44.940	50.560	2.0	2.0	2.0	11.03	11.96	2.760	0.000
GLAZIER		BLD		34.730	35.730	1.5	1.5	2.0	9.700	8.200	0.000	1.250
HT/FROST INSULATOR		BLD		33.930	36.470	1.5	1.5	2.0	7.450	14.77	0.000	0.000
IRON WORKER		ALL		35.090	36.840	2.0	2.0	2.0	8.250	20.59	0.000	0.700
LABORER		BLD		29.580	30.580	1.5	1.5	2.0	8.240	12.32	0.000	0.800
LABORER		HWY		31.950	32.700	1.5	1.5	2.0	8.240	12.50	0.000	0.800
LABORER, SKILLED		HWY		34.250	35.000	1.5	1.5	2.0	8.240	12.50	0.000	0.800
LATHER		BLD		36.320	40.320	1.5	1.5	2.0	7.400	10.95	0.000	0.600
MACHINIST		BLD		43.160	45.160	1.5	1.5	2.0	7.980	8.950	0.000	0.000
MARBLE FINISHERS		BLD		32.410	0.000	1.5	1.5	2.0	7.700	4.840	0.000	0.530
MARBLE MASON		BLD		35.090	35.340	1.5	1.5	2.0	7.700	7.150	0.000	0.560
MATERIAL TESTER I		ALL		21.550	0.000	1.5	1.5	2.0	7.460	4.840	0.000	0.170
MATERIALS TESTER II		ALL		26.550	0.000	1.5	1.5	2.0	7.460	4.840	0.000	0.170
MILLWRIGHT		BLD		35.000	38.500	1.5	1.5	2.0	7.700	13.87	0.000	0.500
OPERATING ENGINEER		BLD	1	40.350	44.350	2.0	2.0	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		BLD	2	39.650	44.350	2.0	2.0	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		BLD	3	37.200	44.350	2.0	2.0	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		BLD	4	35.200	44.350	2.0	2.0	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		BLD	5	44.100	44.350	2.0	2.0	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		BLD	6	43.350	44.350	2.0	2.0	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		BLD	7	40.350	44.350	2.0	2.0	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		HWY	1	40.200	44.200	1.5	1.5	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		HWY	2	39.650	44.200	1.5	1.5	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		HWY	3	38.350	44.200	1.5	1.5	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		HWY	4	36.900	44.200	1.5	1.5	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		HWY	5	35.450	44.200	1.5	1.5	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		HWY	6	43.200	44.200	1.5	1.5	2.0	14.55	9.300	2.350	1.300
OPERATING ENGINEER		HWY	7	41.200	44.200	1.5	1.5	2.0	14.55	9.300	2.350	1.300
PAINTER		ALL		35.700	37.700	1.5	1.5	1.5	9.650	8.460	0.000	1.250
PILEDRIVER		BLD		37.320	41.430	1.5	1.5	2.0	7.400	10.95	0.000	0.600
PILEDRIVER		HWY		37.280	39.030	1.5	1.5	2.0	7.400	9.000	0.000	0.490
PIPEFITTER		BLD		39.900	42.690	1.5	1.5	2.0	7.980	10.69	0.000	1.000
PLASTERER		BLD		33.360	36.700	1.5	1.5	2.0	8.150	11.05	0.000	0.500
PLUMBER		BLD		39.900	42.690	1.5	1.5	2.0	7.980	10.69	0.000	1.000
ROOFER		BLD		38.350	41.350	1.5	1.5	2.0	8.080	8.220	0.000	0.430
SHEETMETAL WORKER		BLD		35.780	37.710	1.5	1.5	2.0	5.450	15.44	0.520	0.290
SPRINKLER FITTER		BLD		36.390	39.140	1.5	1.5	2.0	8.420	8.350	0.000	0.350
STONE MASON		BLD		35.880	38.630	1.5	1.5	2.0	7.950	11.73	0.000	0.600
TERRAZZO FINISHER		BLD		32.410	0.000	1.5	1.5	2.0	7.700	4.840	0.000	0.530
TERRAZZO MASON		BLD		35.090	35.340	1.5	1.5	2.0	7.700	7.150	0.000	0.560
TILE LAYER		BLD		36.320	40.320	1.5	1.5	2.0	7.400	10.95	0.000	0.600

TILE MASON	BLD		35.090	35.340	1.5	1.5	2.0	7.700	7.150	0.000	0.560
TRUCK DRIVER	ALL	1	32.960	33.420	1.5	1.5	2.0	6.900	8.220	0.000	0.000
TRUCK DRIVER	ALL	2	33.110	33.420	1.5	1.5	2.0	6.900	8.220	0.000	0.000
TRUCK DRIVER	ALL	3	33.310	33.420	1.5	1.5	2.0	6.900	8.220	0.000	0.000
TRUCK DRIVER	ALL	4	33.420	33.420	1.5	1.5	2.0	6.900	8.220	0.000	0.000
TUCK POINTER	BLD		35.880	38.630	1.5	1.5	2.0	7.950	11.73	0.000	0.600

Legend:

RG (Region)

TYP (Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers)

C (Class)

Base (Base Wage Rate)

FRMAN (Foreman Rate)

M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.)

OSA (Overtime (OT) is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

## Explanations

### WINNEBAGO COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

### EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous



materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

#### CERAMIC TILE FINISHER, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

#### COMMUNICATIONS TECHNICIAN

Installing, manufacturing, assembling and maintaining sound and intercom, protection alarm (security), fire alarm, master antenna television, closed circuit television, low voltage control for computers and/or door monitoring, school communications systems, telephones and servicing of nurse and emergency calls, and the installation and maintenance of transmit and receive antennas, transmitters, receivers, and associated apparatus which operates in conjunction with above systems. All work associated with these system installations will be included EXCEPT the installation of protective metallic conduit in new construction projects (excluding less than ten-foot, runs strictly for protection of cable) and 120 volt AC (or higher) power wiring and associated hardware.

#### LABORER, SKILLED - HIGHWAY

Individuals engaged in the following types of work, irrespective of the site of the work: asbestos abatement worker, handling of any materials with any foreign matter harmful to skin or clothing, track laborer, cement handlers, chloride handlers, the unloading and loading with steel workers and re-bars, concrete workers wet, tunnel helpers in free air, batch dumpers, mason tenders, kettle and tar men, tank cleaners, plastic installers, scaffold workers, motorized buggies or motorized unit used for wet concrete or handling of building materials, laborers with de-watering systems, sewer workers plus depth, rod and chainmen with technical engineers, rod and chainmen with land surveyors, rod and chainmen with surveyors, vibrator operators, cement silica, clay, fly ash, lime and plasters, handlers (bulk or bag), cofferdam workers plus depth, on concrete paving, placing, cutting and tying of reinforcing, deck hand, dredge hand, and shore laborers, bankmen on floating plant, grade checker, power tools, front end man on chip spreaders, cession workers plus depth, gunnite nozzle men, lead man on sewer work, welders, cutters, burners and torchmen, chainsaw operators, jackhammer and drill operators, layout man and/or drainage tile layer, steel form setter - street and highway, air tamping hammermen, signal man on crane, concrete saw operator, screedman on asphalt pavers, laborers tending masons with hot material or where foreign materials are used, mortar mixer operators, multiple concrete duct - leadsman, lumen, asphalt raker, curb asphalt machine operator, ready mix scalemen (permanent, portable or temporary plant), laborers handling masterplate or similar materials, laser beam operator, con-crete burning machine operator,

coring machine operator, plaster tender, underpinning and shoring of buildings, pump men, manhole and catch basin, dirt and stone tamper, hose men on concrete pumps, hazardous waste worker, lead base paint abatement worker, lining of pipe, refusing machine, assisting on direct boring machine, the work of laying watermain, fire hydrants, all mechanical joints to watermain work, sewer worker, and tapping water service and forced lift station mechanical worker.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

#### OPERATING ENGINEERS - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver (over 27E cu. ft.): Concrete Paver (27 cu. ft. and under); Concrete Placer; Concrete Pump (Truck Mounted); Concrete Conveyor (Truck Mounted); Concrete Tower; Cranes, All; GCI and similar types (required two operators only); Cranes, Hammerhead; Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Locomotives, All; Lubrication Technician; Manipulators; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Raised and Blind Hole Drill; Rock Drill (self-propelled); Rock Drill - Truck Mounted; Roto Mill Grinder; Scoops - Tractor Drawn; Slipform Paver; Scrapers Prime Movers; Straddle Buggies; Tie Back Machine; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Asphalt Spreader; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving and Extracting); Pumps, Over 3" (1 to 3 not to exceed total of 300 ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches; Bobcat (up to and including 3/4 cu. yd.).

Class 4. Elevator push button with automatic doors; Hoists, Inside; Oilers; Brick Forklift.

Class 5. Assistant Craft Foreman

Class 6. Mechanics

Class 7. Gradall.

#### OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Silo Tender; Asphalt Spreader; Autograder; ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Backhoe w/shear attachments; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower of all types; Creter Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Directional Boring Machine over 12"; Dredges; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; GCI Crane; Hydraulic Telescoping Form (Tunnel); Tie Back Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader with attached pusher; Tractor with Boom; Tractaire with Attachments; Traffic Barrier Conveyor Machine; Raised or Blind Hole Drills; Trenching Machine (over 12"); Truck Mounted Concrete Pump with Boom; Truck Mounted Concrete Conveyor; Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Conveyor Muck Cars (Haglund or Similar Type); Drills, all; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro Blaster; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) / 2 ton capacity or more; Non-Self Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed

and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form - Motor Driven.

Class 4. Air Compressor - Small and Large; Asphalt Spreader, Backend Man; Bobcat (Skid Steer) all; Brick Forklift; Combination - Small Equipment Operator; Directional Boring Machine up to 12"; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Trencher 12" and under; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Oilers and Directional Boring Machine Locator.

Class 6. Field Mechanics and Field Welders

Class 7. Gradall and machines of like nature.

#### TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; TTeamsters Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

#### Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task,

the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

#### LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

**SECTION III**

Special Provisions

For

**EAST TERMINAL AUTO PARKING LOT PHASE 1**

**ILLINOIS PROJECT: RFD-4187**

At

CHICAGO ROCKFORD INTERNATIONAL AIRPORT  
ROCKFORD, ILLINOIS

**Final Submittal**

July 6, 2012

Prepared By:

CRAWFORD, MURPHY & TILLY, INC.  
CONSULTING ENGINEERS  
550 N. COMMONS DRIVE, SUITE 116  
AURORA, ILLINOIS 60504  
<http://www.cmtengr.com>





**GENERAL**

These Special Provisions, together with applicable Standard Specifications, Rules and Regulations, Contract Requirements for Airport Improvement Projects, Payroll Requirements and Minimum Wage Rates which are hereto attached or which by reference are herein incorporated, cover the requirements of the State of Illinois, Department of Transportation, Division of Aeronautics for the construction of the subject project at the Chicago Rockford International Airport, Rockford, Illinois.

**GOVERNING SPECIFICATIONS AND RULES AND REGULATIONS**

The "Standard Specifications for Construction of Airports" dated April 1, 2012, State of Illinois Department of Transportation, Division of Aeronautics shall govern the project except as otherwise noted in these Special Provisions. In cases of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern. When noted within the Special Provisions, the Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction", Adopted January 1, 2012, shall also apply.

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## **DIVISION I – GENERAL PROVISIONS**

### **SECTION 40 – SCOPE OF WORK**

#### **40-05 MAINTENANCE OF TRAFFIC**

ADD:

The Contractor shall be responsible for cleaning and maintaining all haul roads and use a pick-up type sweeper on all pavements and adjacent roadways utilized in hauling operations when material is tracked onto said pavement. **The Contractor shall have a sweeper on site and maintain all pavements clear of dirt and debris at all times or as requested by the Resident Engineer.** If the Contractor fails to comply with the Standard Specifications, Contract Plans or these Special Provisions concerning traffic control, the Resident Engineer shall execute such work as may be deemed necessary to correct deficiencies and the cost thereof shall be deducted from compensation due or which may become due the Contractor under the contract. The Contractor shall be responsible for supplying, maintaining and moving all barricades required for construction. The cost thereof shall not be paid for separately, but shall be considered incidental to the contract unit prices.

The Airport Director, following consultation with the Resident Engineer, will give proper notice to the nearest Flight Service Station and the Airways Facilities Chief of the Federal Aviation Administration prior to the beginning of construction. The Contractor shall furnish a flagger in radio control with the Air Traffic at any time the active taxiways or airfield pavement are crossed or used for a haul road. The Contractor shall supply his own radios. The cost thereof shall not be paid for separately, but shall be considered incidental to the contract unit prices.

#### **40-09 AIRPORT OPERATIONS DURING CONSTRUCTION**

ADD:

a. Construction Activity and Aircraft Movements

For construction activity to be performed in areas other than active operational areas, the storage and parking of equipment and materials, when not in use or about to be installed, shall not encroach upon active operational areas. In protecting operational areas, the minimum clearances maintained for runways shall be in conformance with Part 77 of the Federal Aviation Regulations.

All construction operations shall conform to the plans and in accordance with AC 150/5370-2 (Latest Edition) Operational Safety on Airports During Construction.

b. Limitations On Construction

- (1) Open flame welding or torch cutting operations shall be prohibited, unless adequate fire and safety precautions are provided.
- (2) Open trenches, excavations and stockpiled material near any pavements shall be prominently marked with red flags and lighted by light units during hours of restricted visibility and/or darkness.
- (3) Stockpiled material shall be constrained in a manner to prevent movement resulting from aircraft blast or wind conditions.

- (4) The use of explosives shall be prohibited.
- (5) Burning shall not be allowed.
- c. Debris

Waste and loose material capable of causing damage to aircraft landing gears, propellers, or being ingested in jet engines shall not be placed on active aircraft movement areas. Material tracked on these areas shall be removed continuously during the work project. The Contractor shall provide garbage cans in employee parking areas and storage areas for debris.

## **SECTION 50 – CONTROL OF WORK**

### **50-10 INSPECTION OF WORK**

ADD:

The Contractor shall provide portable flood lighting for nighttime construction. Sufficient units shall be provided so that work areas are illuminated to a level of five horizontal foot candles. The lighting levels shall be calculated and measured in accordance with the current standards of the Illumination Engineering Society. Lights shall be positioned so as not to interfere with Airport operations.

### **50-12 LOAD RESTRICTIONS**

ADD:

Contractor's use of the existing airfield and perimeter pavements by equipment and loaded trucks shall be minimized. **Any damage to existing airfield and perimeter pavements shall be repaired by the Contractor at his own expense to the satisfaction of the Owner. Contractor shall obtain written permission from the Airport Director to use any airfield pavements.**

### **50-18 PLANS AND WORK DRAWINGS**

REVISE the fifth paragraph to read:

Shop drawings submitted by the Contractor for materials and/or equipment to be provided as a part of the contract shall be reviewed by the Project Engineer for substantial conformance of said materials and/or equipment, to contract requirements. Shop drawings shall be fully descriptive, complete and of sufficient detail for ready determination of compliance.

REVISE the last paragraph to read:

The following information shall be clearly marked on each shop, working, and layout drawing, catalog cut, pamphlet specifications sheet, etc., submitted.

**PROJECT LOCATION:** Chicago Rockford International Airport

**PROJECT TITLE:** East Terminal Auto Parking Phase 1

**PROJECT NUMBERS** IL Project: RFD-4187

**CONTRACT ITEM:** (i.e. AR 701524 24" RCP, CLASS IV)

**SUBMITTED BY:** (Contractor/Subcontractor Name)

**DATE:** (Date Submitted)

## **SECTION 60 – CONTROL OF MATERIALS**

### **60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS**

ADD: After the last paragraph

The Contractor shall certify all materials contained in the contract. Certification documentation shall be submitted to the Engineer. It shall be the sole responsibility of the Contractor to ensure the delivery of adequate and accurate documentation prior to the delivery of the materials.

**If, upon delivery and incorporation of any materials, the Contractor has failed to provide the necessary submittals as required by Sections 50-18, 60-01, 60-03 and 60-11 of the Standard Specifications and Special Provisions, the pay item shall not be included on the Construction Progress Payment report until such submittals have been furnished.**

### **60-03 CERTIFICATION OF COMPLIANCE**

ADD:

Additional requirements are specified in Section 60-11 Certification of Materials.

### **60-11 CERTIFICATION OF MATERIALS**

ADD:

The Contractor shall certify all materials incorporated into the contract. Certification documentation shall be submitted to the Resident Engineer. It shall be the **sole** responsibility of the Contractor to ensure the submittal of adequate and accurate documentation in order to satisfy the contract material certification requirements **prior** to the delivery of the materials. Materials without certification or those with certification that demonstrates the materials do not meet the requirements of the plans and specifications shall be considered nonconforming and subject to the provisions of Section 50-02.

As a guide to the certification process and requirements, the Contractor shall use the Illinois Department of Transportation/Division of Aeronautics MANUAL FOR DOCUMENTATION OF AIRPORT MATERIALS dated April 1, 2010 or latest edition including any addendums. Copies of this manual are available by contacting Mr. Mike Wilhelm-Division of Aeronautics at (217) 785-4282 or from their website at <http://www.dot.state.il.us/aero/aviamanual.html>.

The cost of providing the required material documentation and certifications shall not be paid for separately, but shall be considered incidental to the associated item.

## **SECTION 70 – LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC**

### **70-17 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS**

ADD:

Special care shall be taken on all operations and particularly near pavement edges to avoid damage to edge lights and all underground electrical cable on the airport. The approximate location of existing underground cable is shown on drawings. Any airfield lights or cable that are broken and require replacement because of the Contractor's operations will be replaced by the contractor at his own expense.

Any airfield cable repairs or replacement to any part of the electrical system made necessary by the Contractor's operations will be made by him in the manner specified in Sections 108 and 125 at no cost to the airport. Cost of replacement to be borne by the Contractor shall include any expense incurred in locating as well as repairing or replacing damaged parts of the system by the owning agency.

**It shall be the Contractor's responsibility to locate and protect all airport-owned utilities within the construction limits.** This includes all electrical cables, storm sewer, drain tile, sanitary sewer and water main.

Special attention is necessary when working near FAA power and control cables. Any FAA utility that is damaged or cut during construction shall be repaired immediately. FAA requires that any damaged cable be replaced in its entirety, no splices will be permitted. No additional compensation will be made for replacement or repair of FAA facilities or cables but, shall be incidental to the contract.

Should any utilities or cables require location, the following people shall be contacted:

**CHICAGO-ROCKFORD INTERNATIONAL AIRPORT**

<b><u>Utility Service or Facility</u></b>	<b><u>Contact (Person)</u></b>	<b><u>Contact (Phone)</u></b>
AT&T – Telephone Cables	J.U.L.I.E. (Joint Utility Locating Information for Excavators)	1-800-892-0123
ComEd - Electric Cables	J.U.L.I.E. (Joint Utility Locating Information for Excavators)	1-800-892-0123
Northern Illinois Gas – Gas Lines	J.U.L.I.E. (Joint Utility Locating Information for Excavators)	1-800-892-0123
NICOR - Gas Lines	J.U.L.I.E. (Joint Utility Locating Information for Excavators)	1-800-892-0123
FAA – Airway Facilities	Airway Facilities Manager 5701 Falcon Road Rockford, Illinois 61109	1-815-484-5300
City of Rockford	Water Division	1-815-987-5700
Rock River Water Reclamation District	Sewer Division	1-815-397-9605

**SECTION 80 – PROSECUTION AND PROGRESS**

**80-03 NOTICE TO PROCEED**

ADD:

The Notice to Proceed will not be given until all materials are certified by the Contractor to be available and on hand and meeting the Buy American requirements per the Contract Documents.

**80-05 LIMITATION OF OPERATIONS**

ADD:

The Contractor shall not have access to any part of the active airfield (runways or taxiways) for any equipment or personnel without approval of the Airport Director.

**80-07 TEMPORARY SUSPENSION OF THE WORK**

REVISE the second paragraph to read:

In the event that the Contractor is ordered by the Engineer to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Resident Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his/her claim information substantiating the amount shown on the claim. The Resident Engineer will forward the Contractor's claim to the Division for the consideration in accordance with



local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspension made at the request of the Engineer, or for any other delay provided for in the contract, plans, or specifications.

## **80-10 DEFAULT AND TERMINATION OF CONTRACT**

DELETE: "and the Contractor's surety" from the first sentence.

## **SECTION 90 – MEASUREMENT AND PAYMENT**

### **90-05 PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK**

ADD the following to subsection B.7. Statements:

All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after completion of the force account work. If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Division, Airport Owner and Local Sponsor are released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery.

## **DIVISION II – PAVING CONSTRUCTION DETAILS**

### **ITEM 150510 – ENGINEER'S FIELD OFFICE**

#### **CONSTRUCTION METHODS**

#### **150-2.1**

REVISE:

Paragraph (G) to the following:

- (G) One (1) electric water cooler dispenser capable of dispensing cold and hot water and a supply of water bottles as needed.

Paragraph (I) to the following:

- (I) One (1) dry process copy machine (including maintenance and operating supplies) capable of both collating and reproducing prints up to a half size (11"X 17") and capable of copying field books.

ADD:

- (N) One first-aid cabinet fully equipped.
- (O) One (1) 800 Watt, 0.8 cubic foot microwave oven.
- (P) One (1) Coffee Maker
- (Q) Solid waste disposal consisting of two (2) 28-quart waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service.

#### **BASIS OF PAYMENT**

#### **150-3.1**

DELETE the second sentence of the second paragraph of this section.

Payment will be made under:

**ITEM AR150510      ENGINEER'S FIELD OFFICE – PER LUMP SUM.**

**ITEM 150520 – MOBILIZATION**

**BASIS OF PAYMENT**

**150-3.1**

ADD:

Payment will be made under:

**ITEM AR150520      MOBILIZATION – PER LUMP SUM.**

## **ITEM 151 – CLEARING AND GRUBBING**

### **DESCRIPTION**

#### **151-1.1**

ADD:

Specifically, this item shall consist of clearing and grubbing of items shown in the plans.

### **CONSTRUCTION METHODS**

#### **151-2.1 GENERAL**

DELETE: The entire Section.

ADD:

Burning of the vegetative material at the site shall not be allowed. The Contractor shall remove all waste material generated by the clearing and grubbing process from the site and dispose of off of airport property.

#### **151-2.2 CLEARING**

DELETE: The last sentence of the first paragraph and the last sentence of the third paragraph.

#### **151-2.3 CLEARING AND GRUBBING**

DELETE: First and second paragraphs.

ADD:

In area shown in the plans or as designated by the Engineer to be cleared and grubbed, all stumps, roots, buried logs, brush and other unsatisfactory vegetative materials shall be removed.

### **METHOD OF MEASUREMENT**

#### **151-3.1**

DELETE: First paragraph.

### **BASIS OF PAYMENT**

#### **151-4.1**

DELETE: This Section.

#### **151-4.3**

DELETE: This Section.

ADD:

Payment will be made under:

**ITEM AR151420      CLEARING TREES 0-2.5' BUTT. DIA. – PER EACH.**

## **ITEM 152 – EXCAVATION AND EMBANKMENT**

### **DESCRIPTION**

#### **152-1.1**

ADD:

All excess excavation material shall be hauled offsite at no additional cost to the contract.

Additional embankment material needed to construct the subgrade shall be obtained from an on-site borrow area located on Airport property. The borrow site is an estimated 10 mile round-trip from the worksite. Borrow material shall consist of stockpiled bituminous millings.

#### **152-1.2 CLASSIFICATION**

DELETE the second, third and fourth paragraphs.

### **CONSTRUCTION METHODS**

#### **152-2.2 EXCAVATION**

REVISE: The 8<sup>th</sup> paragraph of this section to read:

Excavation and embankment shall be compacted to a density of not less than the percentage of the maximum density, at optimum moisture, shown in TABLE 1 as determined by the compaction control tests cited in Division VII for ASTM D698 (Standard Proctor) for Aircraft weights of less than 60,000 pounds. In cut areas, where abandoned utilities, including duct bank, gas pipe lines, fuel lines, water mains and sewer pipe are encountered, the utilities shall be removed. The cost of removal shall be considered incidental unless it is specifically called out for removal on the plan sheets.

#### **152-2.10 TOPSOIL**

DELETE: The 5<sup>th</sup> paragraph of this section and REPLACE with:

Any excess excavation material shall be hauled offsite at no additional cost to the contract.

#### **152-2.15 DUST CONTROL WATERING**

ADD:

This work shall consist exclusively of the control of dust resulting from construction operations and is not intended for use in the compaction of earth embankment.

Dust shall be controlled by the uniform application of sprinkled water and shall be applied as directed by the Resident Engineer, in a manner meeting his approval.

Dust control watering shall not be paid for separately, but shall be considered incidental to the contract.

**METHOD OF MEASUREMENT**

**152-3.3**

DELETE: This section.

**BASIS OF PAYMENT**

**152-4.3**

DELETE: This section and replace with.

Payment shall be made at the contract unit price per cubic yard measured in its final compacted position for On-Site Borrow. This price shall be full compensation for excavating the material, transporting the material, placement and compaction of the material, and for all labor, equipment, tools and incidentals necessary to complete this item. Material stockpiled for later reuse shall not be measured for payment.

**152-4.4**

DELETE: This section.

ADD to **152-4.2:**

Topsoil placement, shoulder fill and embankment fill shall not be paid for separately, but shall be included in the unit bid price for "Unclassified Excavation".

Removal of existing electrical cable, electrical duct bank or conduit, sewer, water main or fuel lines when in conflict with excavation shall not be paid for separately, unless specifically called out for on the plans, but shall be considered incidental to "Unclassified Excavation".

Payment will be made under:

**ITEM AR152410            UNCLASSIFIED EXCAVATION – PER CUBIC YARD.**  
**ITEM AR152441            ON-SITE BORROW – PER CUBIC YARD.**

## **ITEM 152531 – EXPLORATION TRENCH**

### **DESCRIPTION**

#### **152-1.1**

This item shall consist of constructing an exploratory trench for the purpose of locating existing utilities or other obstructions within the construction limits of the proposed improvements, or as directed by the Engineer. Specifically, this item is to identify the depth of the existing water main at locations where proposed improvements cross to identify if a conflict exists.

The Contractor shall have the option of using mechanical trenching or vacuum excavation equipment for the purposes of locating existing utilities.

### **EQUIPMENT AND MATERIALS**

#### **152-2.1**

The locating trench shall be excavated using mechanical trenching equipment.

Vacuum equipment shall be truck mounted with a minimum 1000 cfm vacuum, 15" Hg and 4" hose.

### **CONSTRUCTION METHODS**

#### **152-3.1**

Exploratory excavation of the watermain lowering areas is required within two weeks after the time the contract commences. The Contractor shall determine the depth of the existing watermain at the point of the proposed sewer crossing as well as 10 feet either side of the proposed sewer crossing.

The location of the trench shall be as directed by the Engineer and shall be 18" minimum in width and not less than 72" in depth measured from the existing ground elevation so as to allow for proper investigation of the trench. When an existing utility or obstruction is encountered, each side of the locating trench shall be excavated to a distance of ten feet to establish the line and grade of the item. Any tile or underdrain disturbed shall be immediately repaired and no surface runoff shall be allowed to enter into the tile or drain.

The depth of the trench shall be as necessary to uncover the existing utilities or other obstructions and of adequate width to allow investigation of the investigated item in the trench.

The exploration trenches shall be excavated at the locations required by the Engineer.

#### **152-3.2**

After the trench has been inspected by the Engineer, the excavated material shall be used to backfill the trench. The Contractor shall repair all areas disturbed by the construction of the locating trench to its original condition. The restoration shall include any necessary topsoiling, seeding, fertilizing and mulching. All restoration shall conform to the Standard Specifications and/or these Special Provisions.

**METHOD OF MEASUREMENT**

**152-4.1**

The locating trench will be measured for payment in lineal feet of actual trench constructed and accepted. The exposure distance of ten feet on either side of the utility or obstruction will not be measured for payment.

The Engineer will not differentiate between mechanical excavation or vacuum excavation for the purpose of measurement.

**BASIS OF PAYMENT**

**152-5.1**

The locating trench shall be paid for at the contract unit price per linear foot, which shall be full compensation for all materials, equipment, labor, tools and any necessary incidentals required to complete this item of work. The landscaping including grading and topsoiling required to restore the areas of trenching shall not be paid for separately, but shall be considered incidental to this item.

Payment will be made under:

**ITEM AR152531      EXPLORATION TRENCH - PER LINEAR FOOT.**



**ITEM 152540 – SOIL STABILIZATION FABRIC**

**BASIS OF PAYMENT**

**152-5.1**

ADD:

Payment will be made under:

**ITEM AR152540      SOIL STABILIZATION FABRIC – PER SQUARE YARD.**

## **ITEM 156000 – EROSION CONTROL**

### **DESCRIPTION**

#### **156-1.1**

ADD:

All entrances to the construction site shall have a stabilized entrance constructed in accordance with Standard IL-630 of the Natural Resources Conservation Service and the current Illinois Urban Manual.

### **METHOD OF MEASUREMENT**

#### **156-4.2**

DELETE: This section.

#### **156-4.3**

REVISE: This section to read:

Temporary Seeding and Temporary Mulching shall not be measured for payment, but shall be considered incidental to the contract.

#### **156-4.4**

REVISE: This section to read:

Temporary ditch checks to be paid shall be the number of individual items shown in the plans or ordered by the Resident Engineer used to control erosion and satisfactorily completed and maintained for the duration of the contract.

### **BASIS OF PAYMENT**

#### **156-5.1**

REVISE: This section to read:

Payment will be made at the contract unit price per linear foot of Silt Fence, and at the contract unit price per each for Inlet Protection and per each for Ditch Check. This price shall be full compensation for furnishing all materials for all preparation and installation of these materials, including excavation, placement, tie-down stakes, staples, maintenance and removal and for all labor, equipment, tools, and incidentals necessary to complete this item.

Stabilized construction entrances, temporary seeding and temporary mulching shall not be measured for payment. These items shall be considered incidental to the contract.

Payment will be made under:

<b>ITEM AR156510</b>	<b>SILT FENCE – PER LINEAR FOOT.</b>
<b>ITEM AR156511</b>	<b>DITCH CHECK – PER EACH.</b>
<b>ITEM AR156520</b>	<b>INLET PROTECTION – PER EACH.</b>

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**ITEM 201661 – CLEAN & SEAL BITUMINOUS CRACKS**

**BASIS OF PAYMENT**

**201-6.1**

ADD:

Payment will be made under:

**ITEM AR201661      CLEAN & SEAL BITUMINOUS CRACKS – PER LINEAR FOOT.**

## **ITEM 208515 – POROUS GRANULAR EMBANKMENT**

### **DESCRIPTION**

#### **208-1.1**

REVISE: This section to read:

This work shall consist of furnishing and placing porous granular embankment as the field conditions warrant at the time of construction as directed by the Resident Engineer. This material is intended to repair soft subgrade as directed by the Resident Engineer. **Excavation of the soft subgrade shall be considered incidental to pay item.**

### **MATERIALS**

#### **208-2.1 UNCRUSHED COARSE AGGREGATE**

DELETE: This Entire Section.

ADD:

**(a) Description.** The Coarse Aggregate shall be pit run gravel, gravel, crushed gravel, crushed stone or crushed concrete. The natural and manufactured materials are defined as follows:

**Gravel.** Gravel shall be the coarse granular material resulting from the reduction of rock by the action of the elements and having subangular to rounded surfaces. It may be partially crushed.

**Crushed Gravel.** Crushed gravel shall be the product resulting from crushing by mechanical means, and shall consist entirely of particles obtained by crushing gravel, all of which before crushing will be retained on a screen with openings equal to or larger than the maximum nominal size of the resulting crushed material. If approved by the Engineer, final product gradations may be obtained by screening or blending various sizes of crushed gravel material.

**Pit or Bank Run Gravel.** Pit or bank run gravel shall be a mixture of sand, gravel, silt and clay occurring naturally in a deposit, which is of such quality that it may be used with only minor processing.

**Crushed Stone.** Crushed stone shall be the angular fragments resulting from crushing by mechanical means the following types of rocks quarried from undisturbed consolidated deposits: granite and similar phanocrystalline igneous rocks, limestone, dolomite, sandstone, or massive metamorphic quartzite, or similar rocks.

**Crushed Gravel.** Crushed gravel shall be the product resulting from crushing by mechanical means, and shall consist entirely of particles obtained by crushing gravel, all of which before crushing will be retained on a one inch screen. If approved by the Engineer, final product gradations may be obtained by screening or blending various sizes of crushed gravel material.

**Partially Crushed Gravel.** Partially crushed gravel shall consist of crushed gravel mixed or blended with sand or other similar binding or filler materials produced from approved materials of the same source.

If approved by the Engineer, partially crushed gravel may be produced by blending of aggregates from more than one source, provided the method of blending results in a uniform product. The components of this blend need not be of the same kind of material. The source of material shall not

be changed during the progress of the work without written permission from the Engineer. Where natural aggregate is deficient in fines, the material added to make up deficiencies shall be a material approved by the Engineer.

**Crushed Slag.** Crushed slag shall be the graded product resulting from the processing of air cooled blast furnace slag. Air cooled blast furnace slag shall be the nonmetallic product, consisting essentially of silicates and alumino-silicates of lime and other bases, which is developed in a molten condition simultaneously with iron in a blast furnace. It shall be air cooled and shall have a compact weight (ASTM C29) of not less than 70 lb/cu. ft. (1100 kg/m<sup>3</sup>).

**Crushed Concrete.** Crushed concrete shall be the angular fragments resulting from crushing portland cement concrete by mechanical means. The acceptance and use of crushed concrete shall be according to the latest Bureau of Materials and Physical Research policy memorandum. Evidence of this acceptance must be provided to the Resident Engineer.

The crushed coarse aggregate shall also conform to the following quality requirements:

<u>QUALITY TEST</u> <u>(IDOT "D" Quality)</u>	<u>PERCENT</u>
Na <sub>2</sub> SO <sub>4</sub> Soundness, 5 Cycle ASTM C 88 Max. % Loss	<b>25</b>
Los Angles Abrasion ASTM C 131 Max. % Loss	<b>45</b>

The aggregate shall be free from vegetation, lumps, or excessive amounts of clay and other objectionable substances.

All material passing the No. 4 mesh (4.75 mm) sieve produced in the crushing operation of either stone, slag, or gravel shall be incorporated in the base material to the extent permitted by the gradation requirements.

### **208-2.2 CRUSHED COARSE AGGREGATE**

DELETE: This Entire Section.

### **208-2.3 GRADATION**

DELETE: This Entire Section.

ADD:

The material shall be free from vegetable matter, lumps or clay, and other objectionable or foreign substance.

When submitting materials for consideration, the Contractor shall provide written certification that the material meets the specified requirements. A written gradation shall also be furnished.

Gradation for Porous Granular Embankment shall be as follows:

(a) Crushed Stone and Crushed Concrete

<u>Sieve Size</u>	<u>Percent Passing</u>
*6"	90±10
2"	40±25
#200	0±10

(b) Gravel, Crushed Gravel and Pit Run Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
*4"	90±10
2"	60±25
#4	40±25
#200	5±5

\*For fills greater than 18", sieve size may be 6".

**CONSTRUCTION REQUIREMENTS**

**208-3.2 PREPARING UNDERLYING COURSE**

DELETE: This Entire Section.

**208-3.3 METHODS OF PRODUCTION**

DELETE: This Entire Section.

**208-3.4 PLACING**

DELETE: This Entire Section.

ADD:

The porous granular embankment shall be placed in lifts no greater than one (1) foot thick or as directed by the Engineer. Rolling the top of this replacement material with a vibratory roller meeting the requirements of Section 1101 of the IDOT *Standard Specification for Road and Bridge Construction* should be sufficient to obtain the desired keying or interlock and necessary compaction. The Engineer shall verify that adequate keying has been obtained.

### **208-3.5 FINISHING AND COMPACTING**

DELETE: Fifth sentence, first paragraph.

ADD:

The base shall be compacted to the satisfaction of the Resident Engineer.

Capping aggregate will not be required when embankment meeting the requirements of Section 209 of the Standard Specifications or granular subbase is placed on top of the porous granular embankment. Capping aggregate (two (2) inch depth) meeting the requirements of Section 209 of the Standard Specifications will be required when embankment meeting the requirements of Section 152 of the Standard Specifications is placed on top of the porous granular embankment.

DELETE: Second paragraph.

DELETE: Second sentence, third paragraph and REPLACE with:

When the rolling develops irregularities that exceed 3/8 inch when tested using an acceptable method, the irregular surface shall be loosened, refilled with the same kind of material as that used in constructing the course, and rolled again as required.

### **METHOD OF MEASUREMENT**

#### **208-4.1**

DELETE: This Entire Section.

#### **208-4.2**

DELETE: This Entire Section.

ADD:

The quantity of Porous Granular Embankment shall be the number of cubic yards as measured by the Engineer at the specified thickness of the material placed. If required, the thickness of PGE measured for payment will include the thickness of the capping stone.

The porous granular embankment shall be used as shown and as field conditions warrant at the time of construction. No adjustment in unit price will be allowed for an increase or decrease in quantities.

The Contractor shall furnish approved duplicate load tickets upon which is recorded the net weight of the aggregates in each truck. The Contractor shall submit one (1) load ticket to the Resident Engineer, or his/her duly authorized representative, at the job site when the truck load is incorporated into the base.

#### **208-4.3**

DELETE: This Entire Section.

**BASIS OF PAYMENT**

**208-5.1**

DELETE: Entire Section.

ADD:

Payment for porous granular embankment shall be paid for at the contract unit price per cubic yard, of which price shall be full compensation for the two (2) inch capping stone (if necessary), furnishing, spreading, compacting, watering and all incidentals related to equipment, labor and tools necessary to complete this work.

Payment will be made under:

**ITEM AR208515      POROUS GRANULAR EMBANKMENT – PER CUBIC YARD.**



## **ITEM 209 – CRUSHED AGGREGATE BASE COURSE**

### **MATERIALS**

#### **209-2.1 CRUSHED COARSE AGGREGATE**

DELETE: Gradation “C” in Table 1.

### **CONSTRUCTION METHODS**

#### **209-3.4 FINISHING AND COMPACTING**

ADD:

The base shall be compacted to not less than 100% of maximum density at optimum moisture as determined by compaction control tests specified in Division VII for aircraft with gross weights of less than 60,000 lbs (Standard Proctor ASTM D698).

The Contractor shall submit copies of all density test results for each lift to the Resident Engineer prior to acceptance testing.

DELETE: Second sentence, third paragraph and REPLACE with:

When the rolling develops irregularities that exceed 3/8 inch when tested using an acceptable method, the irregular surface shall be loosened, refilled with the same kind of material as that used in constructing the course, and rolled again as required.

### **METHOD OF MEASUREMENT**

#### **209-4.1**

DELETE: This Entire Section.

#### **209-4.2**

DELETE: This Entire Section.

ADD:

The crushed aggregate base course will be measured by the square yard of the thickness specified in place, completed and accepted. The Contractor shall furnish approved duplicate load tickets upon which is recorded the net weight of the aggregates in each truck. The Contractor shall submit one (1) load ticket to the Resident Engineer, or his/her duly authorized representative, at the job site when the truck load is incorporated into the base.

#### **209-4.3**

DELETE: This Entire Section.

**BASIS OF PAYMENT**

**209-5.1**

DELETE: Entire Section.

ADD:

Payment shall be made at the contract unit price per square yard for crushed aggregate base course. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of these materials, and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

**ITEM AR209608      CRUSHED AGG. BASE COURSE – 8” – PER SQUARE YARD.**

## **ITEM 401610 – BITUMINOUS SURFACE COURSE (SUPERPAVE) – METHOD I**

### **COMPOSITION**

#### **401-3.2 JOB MIX FORMULA**

REVISE: Table 1 to read as follows:

TABLE 1 SUPERPAVE DESIGN CRITERIA

	Automobile/Entrance Roads and Parking Lots
$N_{ini}$	5
$N_{des}$	30
$N_{max}$	42
Percent Air Voids, $V_a$	2.0 – 4.0
Voids Filled With Asphalt, min (%)	75 – 90

### **CONSTRUCTION METHODS**

#### **401-4.12 JOINTS**

ADD the following as the sixth paragraph of this section:

If at any time during the surface course paving operation, it becomes necessary to end a paving lane at a location other than the new finished pavement edge because of ending a day's paving, machinery breakdown, etc., the lane end will be sawed back a sufficient distance to provide a smooth, neat appearing joint from which to resume paving. The sawed face will be painted with a tack coat and this work shall be considered incidental to Item 401, Bituminous Surface Course, and no additional compensation will be allowed.

#### **401-4.14 SHAPING EDGES**

Add the following as the second paragraph for this section:

All pavement edges, including the pavement ends, must be left in proper alignment, as shown on the plans. This may be accomplished by a trimming method, or, at the Contractor's option, by sawing after the paving has been completed. No additional compensation will be made if the sawing method is used.

### **BASIS OF PAYMENT**

#### **401-6.1**

Payment will be made under:

**ITEM AR401610      BITUMINOUS SURFACE COURSE – PER TON.**

## **ITEM 401910 – REMOVE AND REPLACE BITUMINOUS PAVEMENT**

### **DESCRIPTION**

#### **401-1.1**

This item shall consist of bituminous pavement removal and replacement in locations as shown on the plans or as directed by the Engineer. The pavement shall be compacted in accordance with these specifications and shall conform to the lines, grades, thicknesses and typical sections as shown on the plans or as directed by the Resident Engineer.

Each course shall be constructed to the depth, section or elevation required to match the existing pavement structure and shall be rolled, finished and approved prior to the placement of the next course.

### **MATERIALS**

#### **401910-2.1 BITUMINOUS SURFACE COURSE**

The bituminous surface course shall conform to the specifications of Section 401.

#### **401910-2.2 BITUMINOUS BASE COURSE**

The bituminous base course shall conform to the specifications of Section 403.

#### **401910-2.3 BITUMINOUS PRIME COAT**

The bituminous prime coat shall conform to the specifications of Section 602.

#### **401910-2.4 BITUMINOUS TACK COAT**

The bituminous tack coat shall conform to the specifications of Section 603.

### **CONSTRUCTION METHODS**

#### **401910-3.1**

The type of material to be removed along with approximate typical pavement section is shown on the plans and as follows:

TYPE A – Full Depth – 1.5" - 5" depth bituminous pavement

TYPE B – Full Depth – 10" – 12" depth bituminous pavement

Pavement structure information was taken from airport records, data supplied by airport personnel and pavement cores. The Contractor shall verify the type and thickness of material to be removed. **No extra compensation will be allowed for any variations in the pavement sections actually encountered.**

#### **401910-3.2**

The proposed pavement replacement section shall be as specified herein. Prime coat shall be applied to the aggregate base. Tack coat shall be applied between each lift of asphalt and on all vertical faces of the patch area.

### **401910-3.3**

The existing pavement areas to be removed shall be done in such a manner as to prevent damage to the adjacent pavements. All edges adjacent to existing pavements shall be saw-cut full depth prior to removal, as directed by the Resident Engineer.

### **401910-3.4**

Pavement replacement will be as detailed on the plans and constructed in accordance to the applicable Sections 401, 403, 602 & 603. The various materials required for pavement replacement shall be in accordance with the applicable portions of the Standard Specifications and these Special Provisions. Any damage to pavement beyond the limits as shown on the plans **shall be removed and replaced by the Contractor at his expense. These areas shall be saw cut to a uniform width.**

### **401910-3.5**

Pavement Removal and Replacement shall be the removal of the existing pavements as shown on the plans and the replacement pavement shall match the existing pavement thickness. The replacement pavement shall consist of bituminous base course conforming to the specifications of Section 403, matching the existing pavement bituminous base course thickness, with 2" bituminous surface course conforming to the specifications of Section 401 placed as the final lift. The maximum lift thickness shall be 3". For full-depth patching, the existing aggregate base course shall be re-graded and compacted prior to the placement of the bituminous course. Cost of re-grading and re-compacting of the existing base shall be incidental to the pavement removal and replacement.

## **METHOD OF MEASUREMENT**

### **401910-4.1**

The area of pavement removal and replacement shall be measured by the number of square yards, satisfactorily removed, replaced and disposed of as shown on the plans or as directed by the Resident Engineer.

### **401910-4.2**

If additional pavement or subgrade material is removed due to negligence on the part of the Contractor, the additional quantity of pavement removal and replacement of subgrade material will not be measured for payment.

### **401910-4.3**

The bituminous base and surface course, bituminous prime coat and bituminous tack coat will not be measured separately for payment, but will be considered incidental to REMOVE & REPLACE BIT. PAVEMENT – TYPE A or B, per square yard.

## **BASIS OF PAYMENT**

### **401910-5.1**

Payment for REMOVE & REPLACE BIT. PAVEMENT shall be made at the contract unit price per square yard. This price shall include full compensation for sawing, removal, disposal, replacement of asphalt materials, compaction, prime coat, tack coat, including furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work. For the purposes of payment, Type A pavement shall be a depth of 1.5" – 5". Type B pavement shall be a depth of 10" – 12".

Any grading and recompacting of existing granular base course to proper grade shall not be paid for separately but shall be considered incidental to Remove & Replace Bit. Pavement.

Payment will be made under:

<b>ITEM AR401915</b>	<b>REM &amp; REP BIT PAVEMENT – TYPE A – PER SQUARE YARD.</b>
<b>ITEM AR401916</b>	<b>REM &amp; REP BIT PAVEMENT – TYPE B – PER SQUARE YARD.</b>

## **ITEM 403610 – BITUMINOUS BASE COURSE (SUPERPAVE) – METHOD I**

### **COMPOSITION**

#### **403-3.2 JOB MIX FORMULA**

Revise Table 1 to read as follows:

TABLE 1 SUPERPAVE DESIGN CRITERIA

	Automobile/Entrance Roads and Parking Lots
$N_{ini}$	5
$N_{des}$	30
$N_{max}$	42
Percent Air Voids, $V_a$	2.0 – 4.0
Voids Filled With Asphalt, min (%)	75 – 90

### **CONSTRUCTION METHODS**

#### **403-4.11 JOINTS**

Add the following paragraph to this section:

At any time during the base course paving operation it becomes necessary to end a paving lane at a location other than the proposed finished pavement edge because of ending a day's paving, machinery breakdown, etc.; the lane end will be sawed back a sufficient distance to provide a smooth, neat appearing joint from which to resume paving. The sawed face will be painted with a tack coat and this work shall be considered incidental to Item 403 Bituminous Base Course, and no additional compensation will be allowed.

#### **403-4.12 SHAPING EDGES**

ADD:

All pavement edges, including the pavement ends, must be left in proper alignment as shown on the plans. This may be accomplished by a trimming method or at the Contractor's option by sawing after the paving has been completed. No additional compensation will be made if the sawing method is used.

### **BASIS OF PAYMENT**

#### **403-6.1**

Payment will be made under:

**ITEM AR403610      BITUMINOUS BASE COURSE – PER TON.**

## **ITEM 501000 – PORTLAND CEMENT CONCRETE SIDEWALK**

### **DESCRIPTION**

#### **501-1.1**

REVISE: This Section to read:

This item shall conform to IDOT Standard Specifications Section 424 and shall consist of Portland cement concrete sidewalk constructed in accordance with these specifications at the specified locations in conformance with the details, dimensions, lines and grades as shown on the plans or as required by the Engineer.

### **MATERIALS**

#### **501-2.12 GRANULAR BEDDING**

ADD:

A 4" granular bedding course shall be constructed and mechanically compacted under all proposed sidewalk. Granular Bedding shall be IDOT CA-6 in accordance with Item 208.

### **METHOD OF MEASUREMENT**

#### **501-4.1**

DELETE: This Section.

ADD:

The quantity to be paid for shall be the number of square feet of PCC Sidewalk in place, completed and accepted.

Granular Bedding shall not be measured separately, but shall be considered incidental to the sidewalk.

Detectable Warnings shall not be measured separately, but shall be considered incidental to the sidewalk.

### **BASIS OF PAYMENT**

#### **501-5.1, 5.2, 5.3**

DELETE: These entire sections.

ADD:

Payment will be made at the contract unit price per square foot for 4" PCC SIDEWALK and 5" PCC SIDEWALK completed and accepted in accordance with the plans and specifications.

These prices shall be full compensation for furnishing all materials, and for all preparation, excavation, granular bedding and compaction, detectable warnings, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete the item. Granular bedding and excavation for sidewalk shall not be measured separately but shall be considered incidental to the sidewalk items.



Payment will be made under:

<b>ITEM AR501604</b>	<b>4" PCC SIDEWALK – PER SQUARE FOOT.</b>
<b>ITEM AR501605</b>	<b>5" PCC SIDEWALK – PER SQUARE FOOT.</b>

## **ITEM 501900 – REMOVE PCC PAVEMENT**

### **MATERIALS**

#### **501-2.1**

ADD:

The types of materials to be removed consist of P.C.C. sidewalk ( $\pm 4$ " average thickness). Pavement structure information was taken from airport records, data supplied by airport personnel and soil borings. The Contractor shall verify the type and thickness of materials to be removed. **No extra compensation will be allowed for any variations in the pavement sections actually encountered.**

### **CONSTRUCTION METHODS**

#### **501-3.1**

ADD:

The existing pavement areas to be removed shall be done in such a manner as to prevent damage to the adjacent structures and pavement. All pavement and base material removed shall be disposed of off the airport property. All edges adjacent to existing pavements shall be saw cut full depth prior to removal as directed by the Engineer.

### **METHOD OF MEASUREMENT**

#### **501-4.1**

ADD:

The area of pavement removal shall be measured by the number of square feet of pavement removed, and properly disposed, as shown on the plans or as directed by the Engineer.

If additional pavement or subgrade material is removed due to negligence of the Contractor, the additional quality of pavement removal and replacement will not be measured for payment.

### **BASIS OF PAYMENT**

#### **501-5.1**

DELETE: This Section:

ADD:

The accepted quantities of PCC sidewalk removal will be paid for at the contract unit price per square foot which price and payment shall be full compensation for furnishing all materials, equipment, labor, hauling, disposal and all other incidental items necessary to complete the work to the satisfaction of the Engineer.

Payment shall constitute full compensation for pavement removal, saw cutting and disposal of the removed materials, including all labor, tools, equipment and incidentals necessary to complete this item of work. Any work grading and recompacting of existing granular base course to proper grade shall not be paid for separately but shall be considered incidental to pavement removal.

Payment will be made under:

**ITEM AR501690      PCC SIDEWALK REMOVAL – PER SQUARE FOOT.**

**ITEM 602 - BITUMINOUS PRIME COAT**

**CONSTRUCTION METHODS**

**602-3.3 APPLICATION OF BITUMINOUS MATERIAL**

Add the following to the second paragraph:

Areas worn from hauling operations shall be re-primed at no additional cost to the Contract.

**BASIS OF PAYMENT**

**602-5.1**

ADD:

Payment will be made under:

**ITEM AR602510      BITUMINOUS PRIME COAT – PER GALLON.**

**ITEM 603 – BITUMINOUS TACK COAT**

**CONSTRUCTION METHODS**

**603-3.3 APPLICATION OF BITUMINOUS MATERIAL**

Add the following to the second paragraph:

Areas worn from hauling operations shall be re-tacked at no additional cost to the Contract.

**BASIS OF PAYMENT**

**603-5.1**

ADD:

Payment will be made under:

**ITEM AR603510      BITUMINOUS TACK COAT – PER GALLON.**

**ITEM 620000 – PAVEMENT MARKING**

**MATERIALS**

**620-2.2 PAINT**

ADD:

All paint shall be waterborne.

The paint shall contain no lead, chromium, cadmium or barium.

**METHOD OF MEASUREMENT**

**620-4.1**

ADD:

The quantity of permanent markings to be paid for shall be the number of square feet of painting with the specified material **measured only once to apply two coats** in conformance with the specifications and accepted by the Engineer.

The quantity of removal to be paid for shall be the number of square feet removed in conformance with the specifications and accepted by the Engineer.

**BASIS OF PAYMENT**

ADD:

Payment will be made under:

<b>ITEM AR620520</b>	<b>PAVEMENT MARKING – WATERBORNE – PER SQUARE FOOT.</b>
<b>ITEM AR620900</b>	<b>PAVEMENT MARKING REMOVAL – PER SQUARE FOOT.</b>

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**ITEM 625 – TAR EMULSION PROTECTIVE SEAL COAT**

**BASIS OF PAYMENT**

**625-5.1**

ADD:

Payment will be made under:

**ITEM AR625510      TAR EMULSION SEAL COAT – PER SQUARE YARD.**

## **DIVISION III – FENCING (WIRE FENCES)**

### **ITEM 162 – CHAIN-LINK FENCES – (CLASS E)**

#### **DESCRIPTION**

##### **162-1.1**

ADD:

This item shall include removal of Class E fence as shown in the plans or as directed by the Resident Engineer. Three strand barbed wire shall be installed on all new fence.

All fencing shall match the color of the existing fencing. A color sample shall be submitted to the Owner for written approval prior to ordering.

#### **MATERIALS**

##### **162-2.1 FABRIC**

ADD:

The chain link fence fabric shall be Vinyl Coated with Vinyl Coated fittings and ties and coated steel as shown on the plans and conforming to AASHTO M181, Type IV, Class B. Bonding shall be done by the thermal fusion method.

The Vinyl Coating shall be self-extinguishing and shall not support combustion when subject to the Horizontal Flame Test of ASTM D 470.

The color of the coating shall match the existing fence and shall be approved by the Owner prior to ordering and installation.

##### **162-2.3 FENCE POSTS, POST TOPS AND EXTENSIONS, RAILS, GATES, BRACES, STRETCHER BARS AND CLIPS**

ADD:

Posts for 10-foot chain link fence shall conform to the following (min.):

Line posts – 2.375" O.D. (round) Schedule 40 weighing 3.65 lbs/ft, or SS40 3.11 lbs/ft.

Terminal posts – 2.875" O.D. (round) Schedule 40 weighing 5.79 lbs/ft, or SS40 4.64 lbs/ft.

Gate posts – 6.625" O.D. (round) Schedule 40 weighing 18.97 lbs/ft.

##### **162-2.5 WIRE TIES AND TENSION WIRE**

ADD:

Coiled spring tension wire of at least 7 gage O.D. vinyl clad steel wire shall be stretched along the bottom of the fence and securely fastened to the fabric with hog rings at 2 foot intervals.

##### **162-2.6 MISCELLANEOUS FITTINGS AND HARDWARE**

ADD:



Barbed wire support arms shall withstand a minimum load of 250 pounds applied vertically to the outermost end of the arm.

### **CONSTRUCTION METHODS**

#### **162-3.11 FENCE AND GATE REMOVAL**

ADD:

The work shall consist of the removal and disposal of the existing 6-foot, Class E airport security perimeter fence. The fence shall be completely removed including fabric, posts, top rail, miscellaneous fittings and hardware, barbed wire and concrete foundations. At the discretion of the Airport, the removed material shall become the property of the Airport and delivered to a location specified by the Airport Maintenance and Operations staff. Should the Airport decline ownership of the removed materials, the Contractor shall dispose of the material off Airport property.

The fence posts in turf shall be pulled, and not cut off.

All holes shall be filled and compacted with material generated as a part of the holes for the new fence post excavation. If additional borrow material is required, the Airport will designate a borrow location on airport property. At the Contractor's option, offsite borrow material may be supplied at no additional cost to the Owner.

Existing posts located in concrete or asphalt shall be cut off flush with the pavement surface and filled with a non-shrink grout material.

Removal of the existing chain link fence includes removal of all fence posts. No distinction of post diameter will be made for payment purposes.

#### **162-3.13 BARBED WIRE**

Three strands of barbed wire shall be installed above all fence and secured to the posts.

#### **162-3.14 SECURITY AND MAINTAINING THE EXISTING AIRPORT PERIMETER FENCE LINE**

The Contractor shall maintain a continuous perimeter fence throughout the length of his work area in any manner he sees fit. In areas where new fence will replace existing security fence at the same location, temporary fence or guards shall be used to prevent unauthorized persons from entering the airfield. Existing fencing materials removed as part of the contract may be used as temporary fence.

#### **162-3.15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY LOCATING**

The location of known underground utilities is presented on the plans.

It shall be the Contractor's responsibility to determine the actual location of all utilities, including service connections to underground utilities. Prior to construction, the Contractor shall contact JULIE, FAA and Airport Maintenance. Prior to construction, the Contractor shall notify all utility companies of his operational plans. The Contractor shall make arrangements for detailed information and assistance in locating utilities. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company, the Owner and the Resident Engineer. Any such mains and/or services disturbed by the Contractor's operations shall be restored immediately at his expense to the satisfaction of the Owner and the Engineer.

The Contractor shall be responsible for keeping the owner advised of this plan of operations. Prior to commencing work in the general vicinity of an existing utility service or facility, the Contractor shall notify the owner of his plan of operation.

### **METHOD OF MEASUREMENT**

#### **162-4.1**

ADD:

The labor and materials used to erect temporary fence in order to maintain a secured perimeter shall not be measured for payment, but shall be considered incidental to the fencing items.

The use of security forces to guard gaps in the perimeter fence to prevent unauthorized access to the airfield shall not be measured for payment, but shall be considered incidental to the fencing items.

### **BASIS OF PAYMENT**

#### **162-5.1**

DELETE: Entire Section.

ADD:

Payment will be made at the contract unit price per linear foot for Class E Fence, Vinyl-10' with three strands of barbed wire. This price shall be full compensation for furnishing all materials and for all preparation, erection, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item. The use of temporary fence or security forces in order to maintain a secured perimeter shall not be paid for directly, but shall be considered incidental to the fencing items.

#### **162-5.3**

DELETE: Entire Section.

ADD:

Payment shall be made at the contract unit price per linear foot for Class E Fence Removal. No distinction will be made between heights of removed fence. This price shall be full compensation for all removals, restoration, including grading, backfilling, seeding and mulching, and disposal, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

<b>ITEM AR162410</b>	<b>CLASS E FENCE, VINYL-10' – PER LINEAR FOOT.</b>
<b>ITEM AR162900</b>	<b>REMOVE CLASS E FENCE – PER LINEAR FOOT.</b>

## **DIVISION IV – DRAINAGE**

### **ITEM 701 – PIPE FOR STORM SEWERS AND CULVERTS**

#### **MATERIALS**

##### **701-2.1 GENERAL**

DELETE: Entire Section.

ADD:

Pipe shall be of the type and diameter indicated and installed at the locations shown on the plans. Pipe for storm sewers shall be concrete storm sewer pipe Class IV reinforced concrete conforming to ASTM C-76 (with joints meeting ASTM C-361) as called out in the plans.

#### **CONSTRUCTION METHODS**

##### **701-3.3 LAYING AND INSTALLING PIPE**

ADD:

When sewer installation requires tapping into an existing manhole, the hole shall be cored to allow for appropriate pipe sizing. The work shall be considered incidental to the installation of the pipe.

##### **701-3.5 BACKFILLING**

ADD:

Controlled Low Strength Material (CLSM) conforming to Section 701-2.8 shall be used to backfill the trench across Airport Drive and the existing entrance road, as shown on the plans.

##### **701-3.10 PIPE REMOVAL**

ADD:

Pipe removal under proposed pavement areas shall be backfilled per Section 701-3.5. Openings due to pipe removals at existing drainage structures to remain shall be patched with brick and mortar as directed by the Engineer. This work shall be considered incidental to the pipe removal.

**BASIS OF PAYMENT**

**701-5.1**

ADD:

Controlled Low Strength Material (CLSM) used to backfill the trench across Airport Drive and the existing entrance road shall not be measured for payment, but shall be considered incidental to the pipe.

Payment will be made under:

<b>ITEM AR701512</b>	<b>12" RCP, CLASS IV – PER LINEAR FOOT.</b>
<b>ITEM AR701518</b>	<b>18" RCP, CLASS IV – PER LINEAR FOOT.</b>
<b>ITEM AR701524</b>	<b>24" RCP, CLASS IV – PER LINEAR FOOT.</b>
<b>ITEM AR701900</b>	<b>REMOVE PIPE – PER LINEAR FOOT.</b>

## **ITEM 705 – PIPE UNDERDRAINS FOR AIRPORTS**

### **DESCRIPTION**

#### **705-1.1**

ADD:

This item shall also consist of the adjustment of existing underdrain cleanouts at the locations shown on the plans or as directed by the Engineer, in accordance with these specifications and per the details shown in the plans.

### **MATERIALS**

#### **705-2.13 FILTER FABRIC ENVELOPES FOR PERFORATED (PE) TUBING**

ADD:

##### Materials

- (a) An IDOT-approved filter fabric sock may be submitted for approval by the Engineer.

#### **705-2.15 UNDERDRAIN TRENCH ENVELOPE**

ADD:

Geotechnical fabric for UD trench lining shall consist of woven or nonwoven filaments of polypropylene, polyester, or polyethylene. Nonwoven fabric may be needle punched, heat-bonded, resin-bonded or combinations thereof. The filaments must be dimensionally stable (i.e., filaments must maintain their relative position with respect to each other) and resistant to delamination. The filaments must be free from any chemical treatment or coating that might significantly reduce porosity and permeability.

- (a) Physical Properties. The fabric shall comply with the following physical properties:

Weight oz./sq. yd (g/m <sup>2</sup> )	3.5 (120) min.	ASTM D 3776
Grab tensile strength lbs. (N)	100 (450 <sup>1/</sup> ) min. <sub>1/</sub>	ASTM D 4632
Grab elongation @ break (%)	20 min. 1/	ASTM D 4632
Equivalent opening size (EOS NO.)		CW-02215-77 Corps of Engineers
Nonwoven	30 (600 μm) min <sub>2/</sub>	
Woven	50 (300 μm) min <sub>2/</sub>	

- 1/ For woven fabric, test results shall be referenced to orientation with warp or fill, whichever the case may be. Both woven and nonwoven fabrics shall be tested wet.  
2/ Manufacturer's certification of fabric to meet requirements.

### **CONSTRUCTION METHODS**

#### **705-3.3 LAYING AND INSTALLING PIPE**

REVISE this section to read:

Corrugated polyethylene tubing underdrain shall be constructed as follows:

Trenches shall be excavated to the dimensions and grades required by the plans or as directed by the Engineer.

Trenches shall be lined with the underdrain trench envelope prior to placing any stone or underdrain. A 2-foot minimum lap of material is required where breaks in the fabric occur. Prior to installing the pipe, a 4" layer of porous backfill meeting the requirements of Paragraph 2.5 shall be constructed in the bottom of the trench.

Perforated, corrugated polyethylene tubing with filter fabric sock shall be seated in the porous backfill and held firmly in place, while porous backfill meeting the requirements of Paragraph 2.5 is placed to a height of 5 inches ± 1 inch above the tubing. After the first lift is compacted to the satisfaction of the Engineer, the remainder of the backfill shall be placed and compacted. The underdrain trench envelope is then folded over the backfilled trench and weighted down with 1" to 2" of porous backfill.

Perforated, corrugated polyethylene tubing shall be laid true to grade and shall not be stretched more than 5% during installation.

The Contractor shall be required to establish control grade on the underdrain pipe to ensure the pipe is installed at the proper elevation. Contract grade elevations are to be provided to the resident engineer upon request.

### **705-3.6 BACKFILLING**

ADD:

Backfilling material for voids left by underdrain removal under proposed pavement areas shall consist of IDOT CA-6 material compacted to 95% of the maximum density in accordance with ASTM D-698 (Standard Proctor). This cost shall be considered incidental to the associated pay item.

### **705-3.10 HANDLING AND STORAGE**

ADD:

The subsurface drain shall be shipped in a black protective wrapping to eliminate potential fabric deterioration due to prolonged exposure to sunlight.

### **METHOD OF MEASUREMENT**

#### **705-4.1**

ADD:

The quantity of underdrain cleanout adjustments to be paid for shall be the number of cleanouts adjusted and approved by the Engineer on a per each basis. All fittings, caps, pipe, concrete and frames and lids shall be included in the item and will not be measured separately for payment.

### **BASIS OF PAYMENT**

#### **705-5.1**

ADD:

The contract unit price per each for Adjust Underdrain Cleanout shall be full compensation for furnishing and installing all materials, excavation, and for all labor, equipment and tools necessary to complete this item. Payment for fittings, caps, pipe, frames, lids and concrete shall not be paid for separately.

ADD as the last sentence of the first paragraph:

The underdrain trench envelope shall be considered incidental to the underdrain and shall not be measured for payment purposes.

Payment will be made under:

<b>ITEM AR705526</b>	<b>6" PERFORATED UNDERDRAIN W/ SOCK – PER LINEAR FOOT.</b>
<b>ITEM AR705944</b>	<b>ADJUST UNDERDRAIN CLEANOUT – PER EACH.</b>

## **ITEM 751 – MANHOLES, CATCH BASINS, INLETS AND INSPECTION HOLES**

### **DESCRIPTION**

#### **751-1.1**

ADD:

This item consists of the construction, removal and adjustment of manholes as shown on the plans or as directed by the Engineer.

This item shall also consist of removing and replacing the existing sidewalk trench drain with a new structure as detailed in the plans.

Type A manhole with six (6) foot diameters shall conform to IDOT Standard 602406-05.

Type 1 open frame and grates shall conform to IDOT Standard 604001-03.

Type 11 frame and grates shall conform to IDOT Standard 604051-03.

Adjustment of existing manhole shall be raising or lowering of an existing manhole rim to a height no greater than 24". Reconstruction of an existing manhole shall be the raising or lowering of a rim grade of more than 24".

### **CONSTRUCTION METHODS**

#### **751-3.1 UNCLASSIFIED EXCAVATION**

ADD:

(f) DEWATERING – The Contractor shall, at all times, provide and maintain in operation pumping and/or well point equipment for the complete dewatering of the excavation. No structure shall be permitted to be constructed in an excavated area in which any amount of water flows or is pooled.

#### **751-3.11 MANHOLE ADJUSTMENT**

ADD:

All adjustments are to be made with precast rings. All adjusting rings must be mortared together and must be mortared to the casting, as well as to the cone section or flat top of the structure. The maximum height of adjusting rings shall be eight (8) inches including existing rings for any inlet or manhole adjustment. The maximum number of rings in any structure is three. This may require the Contractor to remove existing rings and replace with larger rings.

The Contractor shall be responsible for field checking existing structure configurations for the necessary adjustments.



**BASIS OF PAYMENT**

**751-5.1**

ADD:

The accepted number of sidewalk trench frame and grates removed and replaced shall be paid for at the contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials, and for all preparations, excavation, backfilling and placing of the materials, removal of the existing frame and grate and the new aggregate base course; and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

<b>ITEM AR751560</b>	<b>MANHOLE 6' – PER EACH.</b>
<b>ITEM AR751903</b>	<b>REMOVE MANHOLE – PER EACH.</b>
<b>ITEM AR751927</b>	<b>REPLACE FRAME AND GRATE – PER EACH.</b>
<b>ITEM AR751943</b>	<b>ADJUST MANHOLE – PER EACH.</b>

**ITEM 752 – CONCRETE CULVERTS, HEADWALLS AND MISC. DRAINAGE  
STRUCTURES**

**DESCRIPTION**

**752-1.1**

ADD:

This item shall also consist of the removal of existing end section structures as shown on the plans.

Precast reinforced concrete flared end sections shall be in conformance with IDOT Standard 542301-03.

**CONSTRUCTION METHODS**

**752-3.5 END SECTION REMOVAL**

ADD:

This work shall consist of the removal of existing structures from the locations shown in the plans or as directed by the Resident Engineer. These structures shall be removed completely and the resulting waste materials shall be disposed of off of airport property. Care shall be taken by the Contractor to prevent damage to the existing pipe. Trenches resulting from the removal shall be backfilled in accordance with Item 701.

**METHOD OF MEASUREMENT**

**752-4.1**

ADD:

The number of end section structures removed and disposed of off airport property shall be counted and measured by the completed unit. No distinction shall be made for different size structures.

**BASIS OF PAYMENT**

**752-5.1**

ADD:

The number of end section structures removed, regardless of size, disposed of off airport property and accepted by the Engineer will be paid for at the contract unit price per each. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of materials and disposal; and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

ITEM AR752412	PRECAST REINFORCED CONC. FES 12" – PER EACH.
ITEM AR752424	PRECAST REINFORCED CONC. FES 24" – PER EACH.
ITEM AR752900	REMOVE END SECTION – PER EACH.

## **ITEM 754 – CONCRETE GUTTERS, DITCHES AND FLUMES**

### **DESCRIPTION**

#### **754-1.1**

ADD:

Combination curb and gutter shall comply with IDOT, Standard 606001-04, (Barrier and Depressed).

### **CONSTRUCTION METHODS**

#### **754-3.2 PLACING**

REPLACE:

“15 feet” from the third paragraph with “10 feet”.

REPLACE:

“75 feet” from the third paragraph with “50 feet”.

### **BASIS OF PAYMENT**

#### **754-5.1**

ADD:

Excavation for curb and gutters shall not be measured separately, but shall be considered incidental to the proposed curb and gutter.

Payment will be made under:

<b>ITEM AR754210</b>	<b>CONCRETE CURB - PER LINEAR FOOT.</b>
<b>ITEM AR754410</b>	<b>COMB CONCRETE CURB &amp; GUTTER – PER LINEAR FOOT.</b>
<b>ITEM AR754900</b>	<b>REMOVE CONCRETE CURB – PER LINEAR FOOT.</b>
<b>ITEM AR754904</b>	<b>REMOVE COMB CURB &amp; GUTTER - PER LINEAR FOOT.</b>

## **DIVISION V – TURFING**

### **ITEM 902600 – RELOCATE TREE**

#### **DESCRIPTION**

##### **902-1.1**

This item shall consist of the protection, maintenance, care and relocation of existing trees within the construction limits as shown on the plans or as directed by the Resident Engineer. This work shall include digging up the existing trees, balling and burlapping, heeling-in, maintenance during storage, installation and maintenance of a portable drip irrigation system after tree is replanted.

#### **MATERIALS**

##### **902-2.1 PORTABLE DRIP IRRIGATION SYSTEM**

Portable Drip Irrigation System (PDIS) water bags shall be constructed so that they can be attached to the trees, provide water from three drip points (minimum) and have a zipper attachment that extends from the top to the bottom of the bag.

Watering bags shall be UV treated, reinforced Polyethylene material with a nylon toothed zipper. Each bag shall be capable of holding at least 20 gallons of water. The Contractor shall submit catalog cuts to the Engineer for approval prior to installation.

#### **CONSTRUCTION METHODS**

##### **902-3.1**

The following steps shall be taken in completing this item of work:

- A. Remove trees with earth ball intact around root system. Soil ball size shall comply with the recommendations and requirements of ANSI 260.1 'American Standard for Nursery Stock'. Ball and burlap trees and store on site as directed by the Engineer. Do not bend or bind-tie trees in such a manner as to damage bark, break branches, or destroy natural shape. Provide protective covering during transport. Do not drop balled and burlapped transplants during transport and storage.
- B. Heel-in balled and burlapped transplants until time of replanting. Plants shall be heeled-in at the storage site on same day of digging. No trees shall be dug up and exposed longer than a normal work day.
- C. Water and mulch plants as necessary to maintain optimum health of plant until replanting occurs.
- D. Deliver plants after preparations for planting have been completed and plant immediately. If planting is delayed more than six 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.
- E. Supply and install the required number of PDIS bags as recommended by the manufacturer for each tree transplanted. All PDIS watering bags shall be filled once each week regardless of normal rain conditions or as directed by the

Engineer. The bags shall be calibrated such that they deliver a full bag of water to the tree pit evenly over the period of one week.

F. Submit a watering schedule after the initial installation has been completed. All watering bags shall be removed by December 1st. The Contractor shall store and replace the watering bags only if the project extends beyond the winter season. On April 15th of the following year, the watering bags shall be reinstalled and filled at each transplanted tree location. All bags that are damaged and or missing shall be replaced at the Contractor's expense.

#### **METHOD OF MEASUREMENT**

##### **902-4.1**

The quantity measured for payment shall be the number of trees dug up and re-installed, measured in place and accepted by the Engineer.

#### **BASIS OF PAYMENT**

##### **902-5.1**

The number of trees relocated will be paid for at the contract unit price per each. This price shall be full compensation for furnishing all materials and for digging up the existing trees, balling and burlapping, heeling-in and maintenance during storage, re-planting of the trees, furnishing, installing and supplying water for portable drip irrigation system units; and for all labor, equipment, tools and incidentals necessary to complete the item.

Portable drip irrigation systems shall not be measured separately for payment, but shall be considered incidental to this item.

Payment will be made under:

**ITEM AR902600      RELOCATE TREE – PER EACH.**

## **ITEM 904 – SODDING**

### **MATERIALS**

#### **904-2.2 LIME**

DELETE: Entire Section

### **CONSTRUCTION METHODS**

#### **904-3.1 GENERAL**

DELETE: First paragraph.

ADD:

The approximate areas to be sodded are shown on the plans. The exact limits will be established by the Engineer.

#### **904-3.2 PREPARING THE GROUND SURFACE**

ADD:

The areas to be sodded shall be stripped of vegetation, in accordance with Item 152, thoroughly disked or scarified to a 4" minimum depth, and brought to grade with topsoil as described in Item 152 – Excavation and Embankment.

#### **904-3.5 LAYING SOD**

ADD:

After the ground surface has been prepared and accepted, the Contractor shall furnish and install new sod on the prepared surface.

### **BASIS OF PAYMENT**

#### **904-5.1**

ADD:

Payment will be made under:

**ITEM AR904510      SODDING – PER SQUARE YARD.**

## **DIVISION VI - LIGHTING INSTALLATION**

### **ITEM 106000 ROADWAY LIGHTING**

#### **DESCRIPTION**

##### **106-1.1**

This item shall consist of furnishing and installing parking lot lights, brackets, poles, foundations, internal wiring, fuses, vibration dampners and all accessories required, at the locations shown on the plans or as directed by the Engineer.

#### **EQUIPMENT AND MATERIALS**

##### **106-2.1 LIGHT FIXTURES**

luminaries shall be 1' x 2' T5HO fluorescent with 2 (F1 Type) or 4 (F2 Type) lamps shall operate with 480V, single phase power supply as indicated on the luminaire schedule. The housing shall be constructed of heavy-gauge aluminum with no seams, weld beads or any other visible disturbances on the surface of the housing. All the internal and external hardware shall be stainless steel.

The lens shall be thermal and shock resistant glass and shall be sealed to the frame and secured with four retainer clips. The lens frame shall be piano hinged to the housing.

The reflector system shall be Electro brightened anodized and sealed aluminum. The reflector shall be mounted to a one-piece reflector mask, hinged to the housing for easy access to the ballast compartment.

The ballast shall be tray mounted and rated for -20°F operation. Each fixture shall be supplied with 2 ballasts for Hi/Lo operations.

The fixture shall be treated, primed, baked, covered with a high solids polyester finish and baked again. The final finish shall match with light poles and existing parking lot lighting or as directed by the Engineer.

F1 type luminaires shall be Cat. No. ESTE-1X2-2L-T5HO-UH2-MN-TG-BZ-DF as manufactured by Precision Paragon or approved equal.

F2 type luminaires shall be Cat. No. ESTE-1X2-4L-T5HO-UH2-MN-TG-BZ-DF as manufactured by Precision Paragon or approved equal.

If Contractor elects to submit a light fixture other than the specified fixture, Contractor shall be required to provide a foot candle plot of entire proposed parking lot and walkway to the Project Engineer for review.

##### **106-2.2 LIGHT POLES (TYPE A and TYPE B)**

The proposed poles shall be 30' (Type A) and 10'(Type B) tall round tapered steel poles fabricated from one piece weldable grade carbon steel with uniform wall thickness of .250". The material shall conform to ASTM A-500 grade B with minimum yield strength of 46,000 PSI. The

weld shall be full length longitudinal weld. The anchor base shall be structural quality hot rolled carbon steel plate shall be welded to the shaft at top and bottom. The anchor bolts shall be provided by the pole manufacturer and shall be fabricated from commercial quality hot rolled carbon steel bar with minimum yield strength of 50,000 PSI. The top 8" of the anchor bolts shall be galvanized as detailed on the plans. The proposed poles shall be furnished with hand holes located above the base. Each pole shall be furnished with mounting hardware and vibration dampner as detailed on the plans and required by the manufacturer. The proposed poles shall be furnished with an inside and outside coating of red oxide / zinc chromate primer. The color shall be dark bronze. The proposed Type A poles shall be model no. RTS-DS210-R800E300 and Type B poles shall be model no. RTS-DS210-R590A100 as manufactured by Valmont or equal.

All poles supplied shall be certified to be vibration free at all wind loads.

### **106-2.3 LIGHT POLE FOUNDATIONS**

Foundations for Light Pole shall be 24" diameter and extend 8' below finished grade. Reinforcing steel shall be installed as detailed on the plans.

Anchor bolts shall be supplied by the pole manufacturer and shall be installed according to his recommendations. Anchor bolts shall be "L" shaped and shall be minimum 1" diameter, 36" long with 7" "L" unless otherwise recommended by the pole manufacturer.

Foundations shall conform to the applicable sections of Item 610 of the Standard Specifications. Light pole foundations shall extend 30" above finished grade for Type A light poles and 1" above finished grade for Type B light poles.

### **106-2.4 INTERNAL WIRINGS**

All fusing shall be accessible through the pole handhole for the light poles. Contractor shall provide the waterproof splices, breakaway fuse holders, fuses and other miscellaneous items necessary for a complete installation. The breakaway fuse holders and fuses shall be manufactured by Bussman or equal. All splicing of wiring from main power wiring to #10 wiring within pole shall be done inside the handhole at each pole. All fuses and lightning arrestors shall be within the light pole handhole.

### **106-2.5 GROUND RODS**

All light poles shall be furnished with a ground rod as detailed in the plans. The proposed ground rods shall be 3/4" diameter, 10' long copper clad. The top of the rod shall be buried min. 12" below finished grade. All the connections to the ground rod shall be buried min. 12" below finished grade. All the connections to the ground rods shall be one shot exothermic welding as manufactured by Cadweld or equal.

## **CONSTRUCTION METHODS**

### **106-3.1 POLES AND LUMINARIES**

Poles and luminaries shall be assembled and wired on the ground, then lifted and bolted in place plumb. The pole shall be considered plumb when the center of the top is directly over the center of the base. Plumb is to be measured with a transit by the Resident Engineer.



Wiring run from luminaire to pole base shall have a strain relief clamp provided at the entry to the luminaire to prevent the wires from pulling loose from their terminals at the luminaire. Internal wiring of poles and luminaires including fuses and waterproof splices shall be incidental to this item. Poles and luminaires shall be set on their foundations such that the luminaires aim in the direction indicated on the plans.

All proposed poles shall be grounded to ground rods. Contractor shall use one shot exothermic weld by Cadweld or equal.

### **106-3.2 LIGHT POLE FOUNDATIONS**

The Contractor shall be responsible for the necessary concreting and formwork to install the foundations as detailed on the plans.

The Contractor is referred to Section 610 of the Standard Specifications, which covers the proper installation of the concrete.

Foundations shall extend for 8' below finished grade or pavement. Foundations shall extend thirty inches (30") above finished grade for Type A poles and 1" for Type B poles.

Anchor bolts shall be set according to the bolt circle requirements of the poles supplied. They shall be so arranged that when the pole and luminaire is erected, the luminaire will be properly aimed.

### **106-3.3 POWER AND CONTROL**

The location of power and control materials and work to be performed shall be as indicated in the plans. Electrical cable is covered in Section 108, The Contractor shall furnish and install identifying tags on all wires at the point where they connect to the breaker indicating which lights the wires serve. The Contractor shall stencil an identifying label on the control panel enclosure.

### **106-3.4 RESTORATION**

All areas disturbed by the light fixture installation storing of dirt and other work shall be restored to its original condition. The restoration shall include any necessary topsoiling, fertilizing, seeding or sodding and shall be performed in accordance with the Standard Turling Specifications. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance.

### **106-3.5 CCTV INSTALLATION**

The CCTV camera locations are shown on the plans. The light poles with CCTV cameras shall have conduits for fiber optic cable installed in the light pole foundations as indicated on the plans. The CCTV installation shall be per CCTV specifications.

## **METHOD OF MEASUREMENT**

### **106-4.1**

The quantity of light poles to be paid for under this item shall be the number of units furnished and installed ready for operation. Each unit shall consist of the fixtures, brackets, fuses, internal wiring, ground rods, light pole foundations and any miscellaneous items and fittings required to make the unit operational.

Each unit shall consist of the ballast, housing, and any other items required for successful operations.

Light pole removal payment shall include the removal and delivery of the pole to the Owner. Payment shall also include foundation removal to two (2) foot below finished grade.

The quantity of CCTV cameras and associated enclosures shall not be included in this pay item, it shall be measured and paid under the pay item AR800097 CCTV SECURITY SYSTEM UPGRADES.

### **BASIS OF PAYMENT**

#### **106-5.1**

Payment will be made at the contract unit price for each Type A light pole complete with 4 fixtures, light pole modification, electrical wiring, ground rods and foundation and any other accessories completed by the Contractor and accepted by the Engineer. These prices shall consist of full compensation for furnishing and material, backfilling and compacting trenches, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Light pole removal payment shall include the removal and delivery of the pole to the Owner. Payment shall also include foundation removal to two (2) foot below finished grade.

If, upon delivery and incorporation of any materials ,the Contractor has failed to provide the necessary submittals as required by Sections 30-18, 40-01, 40-03 and 40-11 of the Standard and Special Provisions, the pay item shall not included on the Construction Progress Payment report until such submittals have been furnished.

Payment will be made under

<b>ITEM AR106513</b>	<b>TYPE A AREA LIGHT POLE W/3 FIXTURES -PER EACH</b>
<b>ITEM AR106514</b>	<b>TYPE A AREA LIGHT POLE W/4 FIXTURES -PER EACH</b>
<b>ITEM AR106521</b>	<b>TYPE B AREA LIGHT POLE W/1 FIXTURE -PER EACH</b>
<b>ITEM AR106905</b>	<b>REMOVE LIGHT POLE AND FIXTURE-PER EACH</b>

## **ITEM 108 - INSTALLATION OF UNDERGROUND CABLE FOR AIRPORTS**

### **DESCRIPTION**

#### **108-1.1**

DELETE: The 3<sup>rd</sup> sentence of the first paragraph.

ADD:

This item of work shall consist of the underground installation of 600V cables in PVC conduit, GRS conduit or duct bank at the locations shown on the plans and in accordance with these specifications. When crossing existing utilities or as required by the Engineer, the Contractor shall hand dig the trenches for the proposed cables.

Contractor shall color code all airfield lighting cables in ducts, manholes and handholes as directed by the Engineer. All costs of color-coding shall be considered incidental to the contract unit price for the associated item.

### **EQUIPMENT AND MATERIALS**

#### **108-2.1 GENERAL**

ADD:

Power cables under this item shall be:

- 1/C # 6 XLP-USE, 600V in duct bank and conduit
- 1/C # 6 Ground in duct bank and conduit
- 1/C # 10 XLP-USE, 600V in duct bank and conduit
- 1/C # 10 Ground in duct bank and conduit

#### **108-2.4 CABLE CONNECTIONS**

DELETE: The first and second sentence of paragraph **D. The Taped or Heat-Shrunked Splice.**

ADD:

To further reduce the possibility of water (moisture) entrance into the connector between the cable and the field attached connector, heat shrinkable tubing with interior adhesive shall be applied over all cable connections.

The heat shrinkable tubing shall cover the entire L-823 connector. All connections shall be at manholes or light bases. No direct burial splicing will be allowed.

No splices will be allowed in the new cable unless at the end of a spool of cable. Splices due to termination points shall be done in splice cans, manholes, handholes and light cans. Any repairs necessary to cable damaged during installation shall be done at the Contractor's expense and shall consist of replacing the entire length of damaged cable between pull points.

In line connections for existing cables to be spliced or those which are cut during construction shall be repaired with the cast splice kit. The Contractor shall have a minimum of five (5) splice kits on the jobsite at all times for emergency repairs. Splice markers shall be installed over each splice in cables

not to be abandoned. Cast splice kits shall be as specified in paragraph (a). All field splices shall be covered with a flexible polyolefin heat-shrinkable sleeve.

## **CONSTRUCTION METHODS**

### **108-3.1 GENERAL**

ADD:

Any damages to existing utilities as a result of the Contractor's operations shall be repaired immediately at his expense.

### **108-3.2 INSTALLATION IN DUCT OR CONDUIT**

ADD:

The Contractor shall install conduits in trench between light poles as shown on the plans.

The Contractor shall coordinate the cable trenching, placement and backfilling operations so that the cable will not be damaged by (a) the use of mechanized road building equipment in the area where underground cable is or will be in existence, and (b) stone or other foreign materials falling into the trench or mixing into the trench backfill materials.

### **108-3.3 TRENCHING**

REVISE 24" to 30" in the last sentence of the second paragraph.

ADD:

The installation of PVC conduit using the plowing in method shall not be acceptable.

### **108-3.5 SPLICING**

DELETE: The first and second paragraph of Section **D. Taped or Heat-Shrunked Splices.**

ADD:

Contractor shall use cast splicing kits as described in Article 108-2.4 for any splices made inside the electric handholes. The cast splicing kit shall be series 82-B1 Scotch cast or 90-B1 Scotch cast as manufactured by 3M or equal. Contractor shall provide shop drawing for splicing method and cast splicing kit. Contractor shall also leave minimum 30" of slack on each side of the cable being spliced.

Splicing of FAA cables shall be tested and approved by FAA.

### **108-3.10 LOCATING OF EXISTING CABLES**

ADD:

Contact Personnel are listed in Section 50-17 herein.

### **108-3.11 TERMINATIONS AND CONNECTIONS**

REVISE: In paragraph 3, the number of splice kits required on site from two (2) to five (5).

ADD:

If, due to the length of spool ordered by the Contractor, it is necessary to install additional handholes, the Contractor shall supply same at no additional cost to the project. The handhole shall be the size as directed by the Engineer.

#### **METHOD OF MEASUREMENT**

##### **108-4.1**

DELETE: This Section.

##### **108-4.2**

REVISE: This Section to read as follows.

The length of 600V cable installed in the duct bank /conduit or cable installed in the proposed PVC conduit to be paid for, shall be the number of lineal feet measured in place, completed and ready for operation, and accepted as satisfactory, and no extra quantity will be allotted for any vertical distances or the required cable slack, as stated under Item 108-3.3, in the Standard Specifications. There will be a separate measurement made for each cable installed in conduit.

The cost of routing the cable through duct, splicing, marking, trenching, backfilling, and all connections shall be included in the unit price bid for the cable.

The cost of removing cable as called out in the plans shall not be measured separately for payment, but shall be considered incidental to the unit bid price for the cable.

#### **BASIS OF PAYMENT**

##### **108-5.1**

REVISE: This Section to read as follows:

The cables measured under Item 108-4.2 shall be paid for under this item. These prices shall be full compensation for furnishing all materials and for all preparation and installation of these materials, trenching, backfilling and compacting trenches, all connections, line marking tape and installation, and for all labor, equipment, tools and incidentals necessary to complete these items. The line marking tape installed shall be considered incidental to the work and shall not be paid for separately.

Payment will be made under:

<b>ITEM AR108086</b>	<b>1/C #6 XLP-USE – PER LINEAR FOOT.</b>
<b>ITEM AR108090</b>	<b>1/C #10 XLP-USE – PER LINEAR FOOT.</b>
<b>ITEM AS108090</b>	<b>1/C #10 XLP-USE – PER LINEAR FOOT.</b>
<b>ITEM AR108756</b>	<b>1/C #6 GROUND – PER LINEAR FOOT.</b>
<b>ITEM AR108760</b>	<b>1/C #10 GROUND – PER LINEAR FOOT.</b>
<b>ITEM AS108760</b>	<b>1/C #10 GROUND – PER LINEAR FOOT.</b>

## **ITEM 110 – INSTALLATION OF AIRPORT UNDERGROUND ELECTRICAL DUCT**

### **DESCRIPTION**

#### **110-1.1**

ADD:

This item shall consist of the construction of new PVC conduit direct bury, GRS conduit direct bury, and GRS conduit pushed as indicated on Exterior Conduit Schedule including appropriate duct markers at the locations shown in the plans or as directed by the Engineer.

Contractor shall provide pull wire for each conduit and cap the unused conduits for future use.

### **EQUIPMENT AND MATERIALS**

#### **110-2.9 DUCT MARKER**

ADD:

The Contractor shall provide duct markers for each new or existing duct being used as detailed in the plans. The cost of installation of the duct markers shall be incidental to the contract.

Brass duct markers shall only be used at bituminous pavement locations as shown on the plans. At concrete pavement locations, the Contractor shall stamp the concrete as directed by the Engineer.

Contractor shall provide duct markers for each proposed concrete encased duct or existing duct being used as detailed in the plans. Contractor shall also replace all existing duct markers within the project concrete overlay and bituminous overlay limits as detailed in the plans. The cost of replacement and installation of the duct markers shall be incidental to the contract.

### **METHOD OF MEASUREMENT**

#### **110-4.1**

DELETE: This Section.

ADD:

The quantity of direct buried PVC conduit, direct buried conduit and pushed GRS conduit to be paid for shall be the number of lineal feet installed, measured in place, completed, and accepted. The quantity shall also include trench excavation and backfill.

The quantity of coring into Terminal basement wall will not be measured for payment, it shall be incidental to the lump sum pay item "AR800089 TERMINAL BUILDING MODIFICATIONS".

**BASIS OF PAYMENT**

**110-5.1**

DELETE: Entire Section.

ADD:

Payment will be made at the contract unit price per lineal foot for each type and size of PVC and GRS conduits completed and accepted. These prices shall be full compensation for furnishing all materials and for all preparation, assembly, excavation, aggregate backfill, backfill, compaction, sawcutting and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete these items.

Topsoiling and seeding of the duct and conduit trench shall not be paid for separately but shall be considered incidental to the associated duct.

Payment will be made under:

<b>ITEM AR110117</b>	<b>1 ½" PVC DUCT, DIRECT BURY – PER LINEAR FOOT.</b>
<b>ITEM AR110203</b>	<b>3" PVC DUCT, DIRECT BURY – PER LINEAR FOOT.</b>
<b>ITEM AR110217</b>	<b>1 ½" STEEL DUCT, DIRECT BURY – PER LINEAR FOOT.</b>
<b>ITEM AS110217</b>	<b>1 ½" STEEL DUCT, DIRECT BURY – PER LINEAR FOOT.</b>
<b>ITEM AR110314</b>	<b>4" STEEL DUCT, JACKED – PER LINEAR FOOT.</b>
<b>ITEM AR110610</b>	<b>ELECTRICAL HANDHOLE – PER EACH.</b>



## **DIVISION VIII – MISCELLANEOUS**

### **ITEM 760 – WATERMAIN**

#### **DESCRIPTION**

##### **760-1.1**

The Contractor shall furnish and install the proposed ductile iron pipe of the diameter specified at the locations shown on the plans where the existing watermain is in conflict with the proposed sewer to achieve IEPA water and sewer separation requirements. The work shall include excavation, granular bedding, installation of the ductile iron pipe, polyethylene wrap, cement lined ductile iron fittings, testing and chlorination of the ductile iron pipe and all incidental work required for a complete and operational piping system.

Temporary shutoff, protection, removal and associated actions for the removal of the existing affected section of water main will be incidental to this item.

Select granular backfill will be incidental to this item.

Polyethylene encasement and taping of all joints shall be installed for all buried ductile iron piping, fittings and valves as shown on the plans.

This work shall also consist of adjusting existing water valves as shown on the plans or as directed by the Engineer.

Exploratory excavation of the watermain lowering areas is required within two weeks after the time the contract commences. The Contractor shall determine the depth of the existing watermain at the point of the proposed sewer crossing as well as 10 feet either side of the proposed sewer crossing. This information shall be provided to the Engineer to determine if watermain lowering will be required. If it is determined that watermain lowering is not required at any or all of the locations, the watermain lowering work that is not required shall be removed from the contract. Therefore, this work, or portions of the work, can be deleted from the contract without any adjustment in unit price or total contract price.

All watermain work shall conform to the City of Rockford Water Division Standards and Specifications.

##### **760-1.2 REQUIREMENTS FOR SHUT-DOWN OF EXISTING WATER MAIN**

a.)Permission of the Department of Public Works Water Division shall be obtained by the Contractor prior to any water main shut down.

b.)Notification of Residents 24 hours in advance of water shut off with forms supplied by the Water Division.

c.)Joint coordination between the Contractor and Engineer will be required to assure that each resident with water service has had water pressure restored after water has been turned on.

d.)The Contractor shall meet with Water Division personnel prior to start of construction to exercise valves and determine valve shut off pattern during construction. Only the City of Rockford shall operate valves.

e.) The cost of this item shall be included in the individual bid items and no additional compensation will be allowed.

## **MATERIALS**

### **760-2.1 DUCTILE IRON PIPE**

All materials shall be in compliance with the Standard Specification for Water and Sewer Main Construction in Illinois and City of Rockford Water Division Specifications.

Ductile iron pipe shall be cement-mortar lined and asphaltic coated per ANSI A21.4 (AWWA C-104), ductile iron pipe, push-on type, conforming to the requirements of ANSI specification A21.51 (AWWA C-151), Class 52 for all sizes through 12" and Class 51 for all sizes larger than 12".

Sections of ductile iron pipe shall be connected by means of push-on joints except at those locations noted on the plans requiring mechanical joints, consisting of bells cast integrally with the pipe, which have interior angular recesses conforming to the shape and dimension of a rubber sealing gasket. The interior dimensions of which is such that it will admit the insertion of the spigot end of the joining pipe in a manner that will compress the gasket tightly between the bell of the pipe and the inserted spigot, thus securing the gasket and sealing the joint.

The lubricant used in conjunction with the push-on joints shall be of material that is recommended by the suppliers specified above, or an acceptable commercially processed animal fat or vegetable shortening.

Brass wedges conforming to Section 41-2.05C of the Standard Specifications for Sewer and Water Construction in Illinois shall be used with all push-on joints.

All joints on fittings, valves and bends shall be mechanical joints with ductile iron retainer glands.

Ductile iron piping shall be manufactured by Clow, US Pipe or American Pipe.

### **760-2.2 RESTRAINED GLANDS**

Restrained glands shall be cast from ductile iron and machined to dimensions and/or tolerances hereinafter specified either directly or by reference.

Restrained glands shall be designed for use in place of standard glands for AWWA Standard C111 (ANSI Standard A21.11) mechanical joints. The approved restrained gland type shall be:

- (a) Individually activated wedge type gland (e.g. Megalug style; Uniflange style) shall be used for restraint due to its increased resistance to joint separation as pressure or external forces increase and its ability to provide joint resiliency and deflection. The wedge type gland shall have a working pressure up to three hundred fifty (350) psi in main sizes through sixteen (16) inches, and two hundred fifty (250) psi in larger sizes along with a minimum safety factor of 2:1. The wedges shall be ductile iron heat treated to a minimum hardness of 370 BHN. It shall also have individual activated wedge screws with specially engineered heads designed to break off when desired torque is reached, leaving a hex head in case future removal is required.

Restrained glands shall be furnished factory coated with bituminous material meeting the requirements for outside coatings of AWWA Standard C151 (ANSI Standard A21.51).

### **760-2.3 BEDDING**

Bedding shall meet the IDOT CA-11 gradation unless otherwise approved by the Engineer. The bedding shall be mechanically tamped into place.

### **760-2.4 BACKFILL**

The material used for backfill shall be aggregate meeting the requirements of IDOT FA-6 for 6" above top of pipe and IDOT CA-6 from 6" above pipe to finished subgrade elevation, in accordance with gradations set forth in Item 208.

### **760-2.5 IRON FITTINGS**

Fittings shall be cement lined, tar coated ductile iron with mechanical rubber gasketed joints rated 250 psi and conforming to AWWA C-110/ANSI 21.20. (Clow, American, U.S. Pipe or equal). All fittings shall incorporate retainer glands.

### **760-2.6 POLYETHYLENE ENCASEMENT**

The watermain shall be wrapped in 8 mil. thick (minimum) polyethylene wrap in accordance with AWWA C105/A21.55-82 suitable for the appropriate diameter of pipe.

## **CONSTRUCTION METHODS**

### **760-3.1 DUCTILE IRON PIPE INSTALLATION**

The Contractor shall notify the City of Rockford a minimum of 48 hours prior to work and prior to connecting to existing water main. Only the City of Rockford shall operate valves.

The ductile iron pipe shall be installed as detailed on the plans and in accordance with the applicable provisions of the "Standard Specifications for Water and Sewer Main Construction in Illinois" (latest edition). The ductile iron pipe shall be installed to the grades shown on the plans and shall have a minimum depth of cover of six feet (6'-0") and maximum depth of coverage of eight feet (8'-0") from proposed, future or existing grades.

The Contractor shall excavate under the ductile iron pipe bells to assure uniform bearing of the pipe on the bottom of the trench. Granular bedding shall be placed along the entire length of all ductile iron pipe from six (6) inches below ductile iron pipe to the spring line of the pipe, and with fine aggregate meeting the gradation FA-6 from spring line to six (6) inches above top of pipe. The bedding material and fine aggregate backfill shall be incidental to the ductile iron pipe.

If the excavation has been made deeper than necessary, the ductile iron pipe shall be laid at the lower depth, and no additional cost shall be charged to the OWNER for the extra excavation, or for subsequent adjustments to fire hydrants, valve vaults or house services. All excavated materials not needed for backfilling the trenches shall be disposed of by the Contractor.

Water in the trench shall be removed during pipe laying and jointing operations. This cost shall be considered incidental to the watermain. Provisions shall be made to prevent floating of the pipe. Trench water shall not be allowed to enter the pipe at any time.

Adequate provisions shall be made for safely storing and protecting all water pipe prior to the actual installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and

out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or debris from being deposited therein.

All watermain crossings shall be in accordance with IEPA separation requirements. Where a watermain must cross above an existing sanitary or storm sewer, the invert of the watermain shall be a minimum of 18" above the crown of the sewer for at least 10 feet each side of the crossing. Where proper vertical separation is not obtainable the watermain shall be encased in steel casing pipe to 10 feet either side of the sewer crossing. The casing pipe shall be 6" greater than the bell diameter of the watermain.

Where a watermain must cross below an existing sanitary or storm sewer, the crown of the watermain shall be a minimum of 18" below the invert of the sewer and encased in steel casing pipe for 10 feet either side of the crossing.

All pipe shall be thoroughly cleaned on the inside before laying. Proper equipment shall be used for the safe handling, conveying and laying of the pipe. All pipe shall be carefully lowered into the trench, piece by piece, by means of suitable tools or equipment, in such a manner as to prevent damage to watermain materials and protective coatings and linings. Under no circumstances shall watermain material be dropped or dumped into the trench.

The pipe shall be inspected for defects. All lumps, blisters and excess coal tar coating shall be removed from the ends of each pipe, and the inside of the bell.

When connecting joints, all portions of the joining materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the joint shall be in accordance with the manufacturer's installation instructions. During the construction and until joining operations are complete, the open ends of all pipes shall be at all times protected and sealed with temporary water tight plugs.

The entire section of the pipe shall be pushed forward to seat the spigot end into the bell. After the section of pipe is inserted into the bell (when joining pipe to mechanical joint fittings) the gasket shall then be pressed into place within the bell, being careful to have the gasket evenly located around the entire joint.

Three brass wedges shall be installed at all push on joints.

### **760-3.2 BACKFILL**

All trenches in the locations described above shall be backfilled with selected granular backfill to a point not less than two (2) feet from the outside edges of existing and proposed pavement and one (1) foot from the outside edges of existing and proposed sidewalk.

Non-paved areas shall be backfilled from the springline with originally excavated material free from rocks, frozen material or large clods and shall be carefully placed and compacted to prevent damage to or the dislodging of the ductile iron pipe.

In paved areas, select granular backfill (from the springline of the pipe to the proposed subgrade) shall be constructed in accordance with the applicable sections of the Specification and shall be considered incidental to the sewer pipe.

All trenches shall be compacted during backfilling by mechanical compaction in no greater than 6" lifts to a minimum of 95% of the Standard Proctor Density in accordance with ASTM D-698.

### **760-3.3 THRUST BLOCKING**

Thrust blocks shall be used wherever there is a change in horizontal direction, and on dead ends. On vertical down and vertical up bends, restrained glands are required. Thrust blocks shall be a minimum of 12" of poured Portland cement concrete between undisturbed trench wall and the pipe or fitting. The pipe and joint fittings shall be accessible for repair.

### **760-3.4 RESTRAINED GLANDS**

Restrained glands shall be used on all water mains, hydrant and large service branches, which have vertical down and vertical up bends and any intermediate joints between those bends. Joint restraint will also be required on at least two (2) full pipe lengths of the horizontal run either side of the bend.

On horizontal bends; pipe size, angle of bend, maximum system pressure, soil classification and moisture content, depth of bury, type of trench bedding and compaction and whether or not the pipe is polyethylene wrapped, will all be used in calculating the pipe length to soil friction needed for proper joint restraint on either side of the bends.

### **760-3.5 POLYETHYLENE ENCASEMENT**

Water main, including valves, fittings, hydrant barrels, and appurtenances, shall be fully encased in polyethylene film. The film shall be furnished in tube form for installation on pipe and all pipe-shaped appurtenances such as bends, reducers, offsets, etc. Sheet film shall be provided and used for encasing all odd-shaped appurtenances such as valves, tees, crosses, etc.

The polyethylene tubing shall be installed on the pipe prior to being lowered into the trench. Tubing length shall be sufficient to provide a minimum overlap at all joints of one foot or more. Overlap may be accomplished with a separate sleeve tube placed over one end of the pipe prior to connecting another section of pipe, or by bunching extra overlap material at the pipe ends in accordion fashion. After completing the pipe jointing and positioning the overlap material, the overlap shall be secured in place with plastic adhesive tape wrapped circumferentially around the pipe not less than three (3) turns.

After encasement, the circumferential slack in the tubing film shall be folded over at the top of the pipe to provide a snug fit along the barrel of the pipe. The fold shall be held in place with plastic adhesive tape applied at intervals of approximately three (3) feet along the pipe length. In addition, any rips, punctures, or other damage to the tubing shall be, repaired as they are detected. These repairs shall be made with adhesive tape and over lapping patches cut from sheet or tubing material.

At odd-shaped appurtenances such as gate valves, the tubing shall overlap the joint and be secured with plastic adhesive tape. After which the appurtenant piece shall be wrapped with a flat film sheet or split length of tubing by passing the sheet under the appurtenance and bringing it up around the body. Seams shall be made by bringing the edges together, folding over twice, and taping down. Whenever encasement is terminated, it shall extend for at least two (2) feet beyond the joint area.

Openings in the tubing for branches, service taps, air release valves and similar appurtenances shall be made by cutting an X-shaped slit and temporarily, folding back the film. After installing the appurtenance, the cut tabs shall be secured with tape and the encasement shall be completed as necessary for an odd-shaped appurtenance.

### **760-3.6 TESTING**

All new water main and appurtenances shall be both hydrostatic pressure and leakage tested. The Contractor shall notify the City of Rockford, Resident Engineer and airport representative a minimum of 48 hours in advance of the testing. The City of Rockford, Engineer and an airport representative shall be present at all testing.

The testing shall be in conformance with the "Standard Specifications for Water and Sewer Main Construction in Illinois," Latest Edition and City of Rockford Standards.

Hydrostatic pressure shall not be less than one hundred pounds per square inch gauge (100 PSIG) based on the elevation of the highest point along the test section, or 1.5 times the main pressure, whichever is greater and corrected to the elevation of the test gauge. Test pressure shall not exceed pipe, valve or thrust-restraint design pressures. The duration of each pressure test shall not be less than one (1) hour.

Each valved section of pipe shall be slowly filled with water and the specified test pressure applied. Before applying the specified test pressure, all air shall be expelled completely from the pipe, valves and hydrants. If permanent air vents are not specified, the contractor shall install corporation stops at all points located at a higher elevation than the immediately adjacent sections of main so that air can be expelled as the line is filled with water. After air has been expelled, corporation stops shall be closed and test pressure applied.

After test pressure has been reached and the system allowed to stabilize, not more than plus or minus five pounds per square inch gauge (+- 5 PSIG) deviation will be allowed for the duration of the test.

All Contractor exposed pipe, fittings, valves, hydrants and joints shall be carefully examined. All joints showing visible leaks shall be repaired by the contractor. Any cracked or defective pipe, fittings, valves, or hydrants discovered in consequence of the pressure test shall be removed and replaced by the contractor. The test shall be repeated until satisfactory to the City.

A leakage test shall be conducted if the pressure test cannot be satisfactorily completed. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved sections thereof, to maintain pressure within five pounds per square inch (5 PSI). Leakage shall not be measured by a drop in pressure in a test section over a period of time.

No pipe installation will be accepted if the leakage is greater than specified in AWWA Standard C600, which is determined by the following formula and procedure:

$$\text{Formula: } L = \frac{SD\sqrt{P}}{132,200}$$

L = Allowable leakage, in gallons per hour \*

S = Length of pipeline, in feet

D = Pipe diameter, in inches

P = Test pressure, in PSI (100 PSI minimum) (150 PSI Standard)

ALLOWABLE LEAKAGE: L = \_\_\_\_\_ gals. / hr. \*

\* NOTE: When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gph / inch of nominal valve size shall be allowed.

TEST RESULTS: L = \_\_\_\_\_ gals. / hr.

#### PROCEDURE

1. Slowly fill the water main expelling air at the highest point.
2. Corporation stop used for test procedure should be at the highest elevation, otherwise 0.433 PSI/ft. differential must be added to the 100 PSI minimum test pressure.
3. After test pressure has been reached, start one (1) hour timing period.
4. During one (1) hour test, periodically pressurize system to maintain no more than five (5) PSI loss from original test pressure.
5. Note the original water mark and amount of draw-down on final pressurization at the end of the one (1) hour test.
6. Measure and record the amount of water lost compared to the allowable leakage determined in the formula above. No pipe installed will be accepted if the leakage is greater than determined by the formula.

When pressure and leakage tests are completed and prior to being placed into service, the ductile iron pipe and appurtenances shall be disinfected.

#### **760-3.7 DISINFECTION**

All new water main and appurtenances and shall be disinfected. The Contractor shall notify the City of Rockford, Resident Engineer and airport representative a minimum of 48 hours in advance of the disinfection. The City of Rockford, Engineer and an airport representative shall be present at all disinfecting. Disinfection shall conform to the "Standard Specifications for Water and Sewer Main Construction in Illinois," Latest Edition and the requirements of the City of Rockford.

After the backfilling has been completed, the contractor shall disinfect the pipeline in compliance with the provisions of AWWA Standard C651 and the provisions herein specified. Prior to disinfection, the pipeline or valved section thereof, shall be flushed at a minimum flow velocity of two and one-half (2-1/2) feet per second. Following full development of flow, flushing shall continue until the discharge runs clear or until the City direct flushing operations to cease. In no event shall the duration of flushing be less than ten (10) minutes. Water used in flushing shall be introduced into the pipeline at a point of connection with the existing distribution system designated by the City.

After flushing, the Continuous Feed Method described in AWWA Standard C651 shall be used to disinfect the pipeline or valved section thereof. Water used in disinfecting the pipeline shall be introduced into the pipeline through the pressure test connection made under the provisions the hydrostatic testing.

Bacteriological sample shall be collected from the pipeline following disinfection and final flushing. Samples shall be sent to the Winnebago County Health Department or a State approved laboratory for analysis. If the sample shows the presence of coliform organisms, the contractor shall repeat the disinfection procedure. On resampling, two (2) consecutively good samples on successive days will be required.

If valved sections of the pipeline are disinfected separately, each section will be considered a separate pipeline for disinfection and flushing until disinfection of the upstream section has been satisfactorily completed as determined by bacteriological analysis.

A copy of the final COLIFORM ANALYSIS REPORT, from the State approved laboratory, is to be sent to the City Water Engineering Supervisor and also a copy to the Water Division Operations Center, Water Quality Supervisor or their representative.

### **METHOD OF MEASUREMENT**

#### **760-4.1**

Exploration trenching will be measured per linear foot and will be paid for under ITEM AR152531 – EXPLORATION TRENCH.

Watermain lowering will be measured on an each basis for each size and location as shown on the plans, once the watermain has been lowered, tested, disinfected and is ready for use and accepted by the Engineer.

The quantity of water valves adjusted shall be paid for per each.

Removal of the existing water main pipe, polyethylene wrap, fittings and bedding shall not be measured separately, but shall be considered incidental to the lowering of the water main.

### **BASIS FOR PAYMENT**

#### **760-5.1**

Excavation, removal of existing pipe, bedding, installation of ductile iron pipe, connections, brass wedges, compaction, pressure testing, chlorination shall be included and paid for on a watermain lowering per each basis. Said price shall include all labor, materials, equipment and incidentals as shown on the plans and as specified herein to construct a complete and operational piping system.

Payment for iron fittings shall be considered incidental to the proposed watermain lowering. This item shall also include all work associated with construction of the thrust blocks for horizontal bends, restrained joints for vertical bends and connections to existing watermain.

No direct payment will be made for polyethylene encasement. The cost of furnishing and installing polyethylene encasement shall be considered incidental to the contract unit prices for the respective pay items utilizing the polyethylene encasement. These prices shall be full compensation for furnishing all materials and for all preparation, delivering and installation of these materials, and for all labor, equipment and incidentals necessary to complete the item.

Select granular backfill and fine aggregate backfill will be incidental to this item. The bedding material shall be incidental to the watermain.

Payment will be made at the contract unit price for each Adjust Water Valve completed and accepted by the Engineer.

Exploration trenching will be paid for under ITEM AR152531. ITEMS AR800121, AR800122 and AR800123 may be deleted in their entirety from the contract based on the results of the exploration trenching. Should these items be deleted, no changes to the unit prices or total contract amounts will be considered. Materials shall not be ordered for these items prior to determination of the necessity of the work.



Payment will be made under:

<b>ITEM AR760947</b>	<b>ADJUST WATER VALVE – PER EACH.</b>
<b>ITEM AR800121</b>	<b>6” DUCTILE IRON WATER MAIN LOWERING – PER EACH.</b>
<b>ITEM AR800122</b>	<b>8” DUCTILE IRON WATER MAIN LOWERING – PER EACH.</b>
<b>ITEM AR800123</b>	<b>16” DUCTILE IRON WATER MAIN LOWERING – PER EACH.</b>

## **ITEM 770 – ADJUST SANITARY MANHOLE**

### **DESCRIPTION**

#### **770-1.1**

This work shall consist of furnishing all materials, exterior joint wraps and seals, accessories, equipment, tools, transportation, services and performance of all operations required to adjust sanitary manholes. All casting shall be adjusted to grade shown on the plans or as otherwise directed by the Resident Engineer. The Contractor shall field-verify all manhole rim and invert elevations shown on the plans. All work shall be completed per the Rock River Water Reclamation District's (RRWRD) requirements.

### **MATERIALS**

#### **770-2.1**

Adjusting rings shall be from an IDOT approved producer source. Water-tight sealant shall be E-Z Stik, Kent-Seal, or equal. All materials shall conform to the RRWRD requirements.

### **CONSTRUCTION METHODS**

#### **770-3.1**

All adjusting ring joints shall be sealed water-tight by means of E-Z Stik, Kent Seal, or Equal (including cast iron frame to concrete adjusting ring). Minimum adjusting ring placement height: four inches (4"). Maximum adjusting ring placement height: twelve inches (12"), with only one (1) two-inch (2") ring per manhole; no more than thirty inches (30") from the top of casting to the first step. Joints between adjusting rings and casting shall be water-tight by means of butyl material seal (E-Z Stik, Kent-Seal, or Equal).

#### **770-3.2**

Backfill requirements and material shall be selected granular material as specified under Item 209.

### **METHOD OF MEASUREMENT**

#### **770-4.1**

Measurement will be based on a per each basis for each sanitary manhole adjusted.

**BASIS OF PAYMENT**

**770-5.1**

Payment for furnishing and installing adjusting rings, water-tight sealant, and backfilling shall be at the contract unit price each bid for ADJUST SANITARY MANHOLE. This price shall be full compensation for furnishing all materials and for placing the materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

**ITEM AR770945      ADJUST SANITARY MANHOLE - PER EACH**

## **ITEM 800089 – TERMINAL BUILDING MODIFICATIONS**

### **DESCRIPTION**

#### **800-1.1**

The Contractor shall furnish all equipment, materials and labor necessary to furnish the proposed terminal building modifications as shown in the plans or as specified herein.

This item shall include the proposed 24" x 24" x 12" junction boxes, parking lot lighting controller, circuit breakers, conduits and cabling to provide a complete and operational system. Any parts and labor required by the Contractor to make these changes shall be incidental to this item.

This work shall include all conduits, unistruts, cabling, circuit breakers and labeling required for the complete and operational parking lot lighting, CCTV system upgrades and new sign and also required for cabling used in connection of new equipment at the locations and to the dimensions shown on the Plans or approved by the Engineer.

Work shall include any painting of equipment and conduit, the marking and labeling of equipment and the labeling or tagging of wires, testing of the installation, and the furnishing of all incidentals necessary to place it in operating condition as a complete unit to the satisfaction of the Engineer.

This item shall also consist of furnishing and installing equipment, complete and ready to operate. Included under the item TERMINAL BUILDING MODIFICATIONS are the following major components of work:

Installation of (2) 24" x 24" x 8" surface mounted junction boxes.

Installation of a new parking lot lighting controller as detailed on the plans.

Installation of 120V and 480V circuit breakers in existing panels as indicated on the plans.

Installation of fiber optic patch panels as required for termination of CCTV and sign fiber optic cables.

Installation of fiber/Ethernet switch as required for sign interface with Airport's LAN.

Installation of power and fiber optic cables inside the terminal building as shown on the plans.

Installation of conduits inside the terminal building as shown on the plans.

### **EQUIPMENT AND MATERIALS**

#### **800-2.1 ELECTRICAL EQUIPMENT**

The 120V and 480V circuit breakers to be installed in existing panelboards shall match with make, model, short circuit rating and type of the existing circuit breakers.

24" X 24" X 8" junction boxes shall be NEMA 12, surface mounted, labeled "ELECTRIC" or "COMMUNICATIONS".

Wire size shall not be less than #12AWG, unless otherwise detailed on the plans, and shall be insulated for 600 volts.

Parking lot lighting controller shall be as detailed on the plans.

### **800-2.2 PARKING LOT LIGHTING CONTROLLER**

Lighting contactors shall be electrically held, 30 A, 2P, 480VAC minimum with field convertible contacts and shall be Square D, Type SPO-10 or equal. Contractor shall supply all relays and bases and all necessary contacts as required. All contactors and relays shall be mounted on the new Hoffman enclosure as required. Total of 4 contactors shall be installed as detailed on the plans.

Timeclock shall be Itermatic model no. ET70815CR or approved equal. The timeclock shall be installed inside the enclosure for the lighting controller. The controls shall be connected to existing Building Automation System for automatic operations of the parking lot lighting system.

## **CONSTRUCTION METHODS**

### **800-3.2 MARKING AND LABELING**

All new or modified equipment, control wires, etc. installed under this contract shall be tagged, marked, or labeled as required.

### **800-3.3 TESTING**

The installation shall be tested in operation as a completed unit prior to acceptance. Tests shall include resistance, voltage and current readings, as required by the Engineer. Testing equipment shall be furnished by the Contractor. Tests shall be conducted as directed by the Engineer and shall be to his satisfaction. The Contractor shall be responsible for all equipment and conduit in place which will be connected to the new equipment, and any equipment or materials found to be defective or damaged shall be replaced by the Contractor at his own expense.

All testing shall be in the presence of the Engineer and an Airport Representative.

### **800-3.4 OPERATION AND MAINTENANCE MANUALS**

The Contractor shall supply four (4) copies of Operational and Maintenance Manuals and schematics for the lighting controller.

## **METHOD OF MEASUREMENT**

### **800-4.1**

The proposed AR800089 Terminal Building Modifications shall include all material and labor required for the installation of the new parking lot lighting controller, circuit breakers, junction boxes, fiber optic patch panels, Cable/Conduit, testing, and associated items required for a complete and operational system.

The proposed AS800089 Terminal Building Modifications shall include cable/conduit, circuit breaker, fiber/Ethernet switch and any work associated with new sign.

**BASIS OF PAYMENT**

**800-5.1**

Payment will be at the contract unit price per lump sum or each as described below, complete and accepted for each item. This price shall be compensation in full for all preparation, assembly, removal, materials, labor, equipment, tools and incidentals necessary to complete the item as specified herein or as directed by the Engineer.

Payment will be made under:

<b>ITEM AR800089</b>	<b>TERMINAL BUILDING MODIFICATIONS – PER LUMP SUM.</b>
<b>ITEM AS800089</b>	<b>TERMINAL BUILDING MODIFICATIONS – PER LUMP SUM.</b>

## **ITEM 800097 – CCTV SECURITY SYSTEM UPGRADES**

### **DESCRIPTION**

#### **800-1.1 GENERAL**

- A. This item includes five (5) CCTV cameras added to the existing CCTV system at the Airport. Existing CCTV system at Rockford Airport was installed by:
- Kratos|HBE  
135 E. St. Charles Road, Suite C-1  
Carol Stream, IL. 60188  
Phone: 630-868-3740
- New CCTV cameras and system upgrades must be compatible with existing system.
- B. All labor and materials including full cross-point matrix switcher, cameras, lenses, housings, mounting apparatus, power supplies and media converters and other equipment that are required to form a fully functional digital/IP CCTV system as shown on the Drawings and specified herein are part of this item.
- C. The initial programming of the monitors, switcher and control equipment including but not limited to all titles and preset positions as well as the testing, owner training and documentation of the installed CCTV system as shown on the Drawings and specified herein are also part of this item. All costs associated with programming, testing, training and documentation of the system shall be included in the item.
- D. Fixed and PTZ cameras mounted on parking lot light poles Some remote locations will be connected to the CCTV system via multi-mode fiber optic cable.
- E. All CCTV cabling required for the system and also shown on the Drawings shall be furnished and installed as required for the complete and functional CCTV system.
- F. Integration with the existing digital video management system is part of this item: Include all costs required to cover the integration as contained in these Specifications.

#### **800-1.2 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of CCTV systems, components and accessories, of types, capacities and characteristics required, whose products have been in satisfactory use in similar service for not less than five (5) years.
- B. Installer's Qualifications: Firms with at least three (3) years of successful installation experience with projects utilizing CCTV system work similar to that required for this project.
- C. Equipment Qualifications: Underwriters Laboratory (UL) approval labeling or International Organizations for Standardization (ISO) compliance labeling.

#### **800-1.3 SUBMITTALS**

- A. General: Partial submittals are not acceptable. Submit all documentation in accordance with Conditions of Contract Documents as well as this section.
- B. Informational Data: The successful bidder shall submit the following documents a minimum of ten (10) Days prior to the Pre-Construction Conference:
1. Proposed Construction Schedule.

2. Contractor Qualification Data demonstrating capabilities and experience of the firm. Include lists of completed projects with information on project name and address, name and addresses of architects, consultants or Owners involved in these projects.
  3. Installer Certifications on manufacturer's letterhead indicating that installer complies with the manufacturer's requirements necessary to install the equipment specific to this project.
- C. Installation Work Plan: At the Pre-Construction Conference, the successful bidder shall submit a work plan for approval by the Engineer. The work plan shall describe normal and special work hour schedules. The plan shall detail methods for protection of existing equipment, daily cleanup, restoration of exposed ceilings and any other activity that assures continuing operation with minimal impact on operations and passenger activities.
- D. Product Data: At the Pre-Construction Conference the successful bidder shall submit manufacturer's data on CCTV System components as follows:
1. Electrical Specifications.
  2. Mechanical Specifications.
  3. Instructions for installation and operation.
  4. On data sheets that illustrate multiple models, the particular model proposed for the application shall be encircled or underlined. Individual copies shall be included for each proposed model number indicating areas of application.
  5. Deviations from Specifications shall be encircled or underlined on the documents and be marked as deviations.
- E. Shop Drawings: The successful bidder shall provide Shop Drawings showing equipment quantities, locations, types and arrangements including but not limited to:
1. Dimensions.
  2. Product identification.
  3. Fabrication and installation Drawings.
  4. Rough-in diagrams.
  5. Wiring diagrams showing field-installed wiring.
  6. Schedules and Tables.
  7. Design calculations and methods.
  8. Compliance with specified standards.
  9. If rack mounted equipment is used, provide an assembly drawing of every equipment rack with locations, quantities, model numbers of individual components contained in the rack, and dimensions shown on the Drawing.
- F. The successful bidder shall submit for review and approval, by the Engineer or designated representative a test plan a minimum of fourteen (14) days prior to substantial completion. The test plan shall detail test procedures and test reports that indicate testing methods, testing device calibration, and interpretations of test results for Field Acceptance Tests. The test plan shall detail the objectives of all tests. The tests shall clearly demonstrate that the CCTV system and its components fully comply with the requirements specified herein.



- G. Training: Provide training schedule for approval by the owner seven (7) days prior to substantial completion. Include course outline and training material planning to be used in the training for approval by the consultant. Plan on holding two (2) sessions focused on administration and maintenance of the system and a minimum of four (2) sessions focused on user training. Some of the training sessions will be conducted after normal business hours to accommodate those on evening, weekend and night shifts.

#### **800-1.4 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of CCTV systems, components and accessories, of types, capacities and characteristics required for this job, whose products have been in satisfactory use in similar installations for not less than five (5) years.
- B. Installer's Qualifications: Firms with at least three (3) years of successful installation experience with projects of similar size and environments utilizing the brand of CCTV equipment proposed for this project.
- C. Code compliance: comply with national and municipal codes as applicable to construction and installation of CCTV equipment and signal distributions systems. When there is a conflict between codes, the more stringent will apply.

#### **800-1.5 INTELLECTUAL PROPERTY**

- A. Should patented articles, methods, materials apparatus, etc., be used in this work, the Contractor shall acquire the right to use it. The Contractor shall hold the Airport and its agents harmless for any delay, action, suit, or cost growing out of the patent rights for any device on this project.
- B. Should copyrighted software be used in this work, the Contractor shall acquire the right to use it. The Contractor shall hold the Airport and its agents harmless for any delay, action, suit, or cost growing out of copyrights for any software on this project.
- C. All software required for the complete operation of the system as specified herein shall be delivered with either full Ownership transferred to the Airport or a License to use at this site, including the right to make back up copies.

#### **800-1.6 WARRANTY**

- A. Period: The Contractor shall guarantee all labor, workmanship, and materials for a period of two (2) years from the date of final acceptance. Should a failure occur within the first two (2) years to the system, the Contractor shall provide all labor and materials necessary to restore the system to the condition required for the final test and acceptance for this contract, at no cost to the Airport.
- B. Software Maintenance: The contractor shall maintain the operating system and CCTV software to the most current version available from the manufacturer during the warranty period at no additional cost to the Airport.
- C. During the warranty period, all periodic and routine maintenance of the installed components to maintain the factory warranty shall be provided at no additional cost under this contract.
- D. Tie-ins: During the warranty period, components may be connected/disconnected from the system as applicable. New devices will be connected in a similar manner as shown on the drawings for this contract by a qualified company and the existence of the new connections or deletion of existing connections shall not void the system warranty on the original system.

- E. Response Times: For the Warranty Period, the following response times shall be maintained:
1. The initial call to the contractor shall require the type of call to be classified as critical or non-critical by the owner. The nature of the problem and the effect on operations will be the deciding factor in classifying the problem. For the purpose of defining the priority of the call, the contractor shall have personnel accessible to Airport personnel via phone callback within one (1) hour of initial call.
    - a. Non-critical Items: For purposes of this section, these are defined as failures or problems, which do not affect the overall safety, security, or operation of the Airport. For example, the loss of operation on a single camera would usually be considered non-critical.
    - b. Critical Items: For purposes of this section, these are defined as failures or problems, which do affect the overall safety, security, or operation of the Airport. A failure of the matrix switch resulting in the loss of monitoring capabilities would be an example of a critical item requiring immediate remedy.
- F. Non-critical items: The contractor shall diagnose and remedy the problem during normal working hours of the next working day. The initial response shall be the morning of the next day if received before noon or by the noon the next day if received before close of business. Normal business hours are defined as 8 AM to 5 PM Monday through Friday.
- G. Critical Items: Critical Items require the contractor to respond with all due speed. These will possibly need to be responded to outside of normal business hours.
- H. The contractor must respond on-site to all critical item calls within four (4) hours of the initial call.

### **800-1.7 RADIO/TELEVISION INTERFERENCE**

- A. FCC Compliance: All equipment that uses radio frequency energy shall be certified to comply with Subpart J of Part 15 of Federal Communication Commission rules CFR 47 as those rules define a class "A" computing device.
- B. This CCTV system is to be installed in a major airport and is subject to background RF levels expected in such an area. It is the Contractor's responsibility to protect the specified systems from interference of other systems, and through FCC compliance listed above, to prevent interference with other systems.

### **EQUIPMENT AND MATERIALS**

#### **800-2.1 FIXED DOME CAMERA**

1. The HIGH DEFINITION FIXED DOME shall be an HD minidome network camera supporting three codecs, JPEG, MPEG-4 and H.264, any two of which can be used simultaneously. The HIGH DEFINITION FIXED DOME shall utilize a 1/3-type, Exmor CMOS sensor of approx. 1.4 Megapixels and have a day/night capability.
2. The HIGH DEFINITION FIXED DOME shall incorporate View-DR (Visibility Enhanced Wide Dynamic Range) technology, to produce images with very wide dynamic ranges of up to 130 dB. View-DR shall be a combination of the following three technologies: Full capture Wide-D, Visibility Enhancer (VE) and the high-speed Exmor CMOS. Full capture Wide-D shall expand the video dynamic range of the camera to improve the visibility of images even in extremely high-contrast environments and shall also compensate for scenes with extremely poor contrast.

3. The HIGH DEFINITION FIXED DOME shall have a Visibility Enhancer (VE) function, which optimizes the brightness and color reproduction of an image dynamically on a pixel-by-pixel basis to provide better visibility in poor backlight conditions.
4. The HIGH DEFINITION FIXED DOME shall have a feature called XDNR (Excellent Dynamic Noise Reduction), which reduces AGC noise to provide clear images without motion blur. XDNR also reduces image data size.
5. XDNR and VE can be used in conjunction with each other and shall provide approximately four times the sensitivity compared to the condition where both features are set to off. The HIGH DEFINITION FIXED DOME shall have built-in IR illuminators which allow for capturing images in the complete darkness (0 lx). The camera shall have two modes: 'Sync with Day/Night' and 'off'. When 'Sync with Day/Night' mode is selected, IR illuminators are automatically activated when the camera switches to night mode. There shall be six selectable 'Maximum Strength' levels to control the intensity of the IR illuminators.
6. The IR illuminators shall have a wavelength of 850 nm.
7. The IR illuminators shall be effective (50IRE [IP]) at 30 m (98.4 ft) when the camera is set as follows: View-DR Off, VE Off, AGC High, XDNR Middle.
8. The HIGH DEFINITION FIXED DOME shall have an Easy Focus function, which adjusts the camera focus by using the Easy Focus button on the camera unit or remotely via the GUI. When the camera is switched between day and night modes, the Easy Focus function is automatically activated to keep the camera focused.
9. The HIGH DEFINITION FIXED DOME shall also have a zoom/focus adjustment capability via the ZOOM/FOCUS switch on the camera unit or remotely via the GUI.
10. The network interface shall be via an 8-pin RJ-45 connector, 10Base-T /100Base-TX Ethernet. Both IPv6 and IPv4 are supported.
11. The HIGH DEFINITION FIXED DOME shall utilize JPEG, MPEG-4 and H.264 compression. There are two 'resolution' modes to choose from when installing a camera: 1280 x 720 (HD) (default) or 1280 x 1024 (SXGA).

When 1280 x 720 mode (aspect ratio: 16:9) is selected, and resolutions in 4:3 aspect ratio are chosen, the displayed image will be stretched vertically. When 1280 x 1024 mode (aspect ratio: 5:4) is selected, and resolutions in 16:9 aspect ratio are chosen, the displayed image will be stretched horizontally.

12. The maximum frame rate capability of the HIGH DEFINITION FIXED DOME over LAN shall be 30 frames per second at 1280 x 720 resolution in any of the three codecs (H.264/MPEG-4/JPEG). The maximum frame rate at 1280 x 1024 resolution shall be 30 frames per second in JPEG, 25 frames per second in MPEG-4 and 20 frames per second in H.264.
13. The HIGH DEFINITION FIXED DOME shall have the capability of simultaneously encoding up to two of the following codecs in any combination: JPEG, MPEG-4, and/or H.264 including multiple instances of the same codec.
14. The HIGH DEFINITION FIXED DOME shall have an analog video output producing 600 TV lines of horizontal resolution when the camera is in 1280 x 1024 mode (5:4 aspect ratio).
15. The supported operating systems shall be Microsoft Windows 7™ 32bit (Ultimate/Professional), Windows Vista® 32bit (Ultimate/Business), Windows® XP 32bit (Professional), and DirectX® 9.0c or higher. Minimum PC requirements shall be the Intel Core®2 Duo Processor, 2 GHz or higher, with 1GB RAM or more supporting 1600 x 1200 or higher resolution, 24-bit True Color display capability with Ethernet 100Base-TX.
16. The HIGH DEFINITION FIXED DOME shall incorporate a built-in web server, such that the standard web browser Microsoft® Internet Explorer (version 6.0, 7.0 or 8.0 recommended) can be used to access the camera without need for special viewer software. The following web browsers can also be used to access the camera with the 'Plug-in Free' viewer: Firefox version 3.5, Safari version 4.0 and Google Chrome version 4.0. When using these browsers, the video is displayed in JPEG format.
17. The 'Plug-in Free' viewer also supports the Flash plug-in and ActiveX viewer, the latter allowing for MPEG-4 and H.264 video streams.
18. The HIGH DEFINITION FIXED DOME shall support ActiveX viewer which allows the camera image to be viewed in Internet Explorer. The ActiveX viewer allows for recording of video and audio directly to the PC's hard drive, and supports direct audio from the PC mic to the camera.
19. The HIGH DEFINITION FIXED DOME shall be capable of generating HTML code for the video image, allowing for easy web page integration.
20. The HIGH DEFINITION FIXED DOME shall support Windows Vista Sidebar Gadgets and shall allow for the ActiveX viewer to be modified.
21. The HIGH DEFINITION FIXED DOME web browser shall support the following languages: English, Japanese, Simplified Chinese, French, Spanish, German, and Italian.
22. The HIGH DEFINITION FIXED DOME shall be capable of supporting up to ten (10) users simultaneously over the network.
23. The HIGH DEFINITION FIXED DOME shall have up to six user level settings. The administrator shall have complete access/control of the cameras. The other five levels of access can be set to limit user privileges to functions such as viewing, changing image size, etc.

24. The HIGH DEFINITION FIXED DOME shall have the capability to stream MPEG-4 and H.264 video in TCP protocol or MPEG-4 and H.264 in UDP (unicast/multicast) protocol.
25. The HIGH DEFINITION FIXED DOME shall have an Adaptive Rate Control (ARC) function when using MPEG-4 and H.264 compression. This function when enabled, shall allow the camera to maintain the frame rate at a reduced image quality when network congestion occurs. Should network bandwidth become further restricted, the frame rate shall then drop automatically to a suitable speed to maintain image integrity.
26. The HIGH DEFINITION FIXED DOME shall incorporate a built-in Intelligent Motion Detection (IMD) capability. To minimize false triggers, the HIGH DEFINITION FIXED DOME IMD shall compare the current image with prior 15 frames within the camera. The IMD algorithm shall allow the camera to discriminate against some environmental noise such as shaking leaves or AGC noise.
27. The camera shall incorporate Sony's Distributed Enhanced Processing Architecture (DEPA™) Advanced technology whereby the IMD function can be used with built-in Video Motion Filters (VMF) to trigger alarms based on rules. The camera shall have the following five VMFs, all of which can be set from the camera setup menu:
  - a. Appearance filter: detects objects that match the detection criteria for objects entering into a user defined area.
  - b. Disappearance filter: detects objects that match the detection criteria for objects exiting a predefined area.
  - c. Existing filter (Loitering filter): detects an object that stays within a defined area longer than the set limit.
  - d. Capacity filter: triggers an alert when the number of detected objects meets or exceeds the detection criteria for object number within the configured area.
  - e. Passing filter or virtual borders: detects objects crossing the set virtual borderline, going in either direction or a specified direction.
28. The HIGH DEFINITION FIXED DOME shall have an audio detection function, which detects loud sounds via an external microphone to trigger alarms or camera actions. The HIGH DEFINITION FIXED DOME shall compare the detected sound with the threshold learned from ambient noise and the frequency to minimize false triggers. The sensitivity settings shall be Low, High and Manual (1 to 100).
29. The HIGH DEFINITION FIXED DOME shall have a camera tampering detection function that alerts the operator if the camera is tampered with. Tampering can include spraying the camera lens, covering it with a cloth, or changing the mounting direction.
30. The HIGH DEFINITION FIXED DOME shall be capable of electronic pan/tilt/zoom, or so called 'Solid PTZ'.
31. The HIGH DEFINITION FIXED DOME shall be capable of predefining up to eight PTZ positions when the Solid PTZ function is enabled.

32. The HIGH DEFINITION FIXED DOME shall be capable of guard tour (position tour), for which up to sixteen (16) presets can be programmed when the Solid PTZ function is enabled. Up to five programs (tours) can be set.
33. The HIGH DEFINITION FIXED DOME shall be capable of image cropping in all codecs, such that only the area of interest is transmitted, to reduce bandwidth and file storage requirements.
34. The HIGH DEFINITION FIXED DOME shall support the following network protocols: TCP, IPv4, IPv6, DNS, RTP/RTCP, RTSP, UDP, ARP, HTTP, HTTPS, ICMP, IGMPv3, SMTP, FTPs, FTPc, DHCP, NTP and SNMP (MIB-2). Network security shall be via Password (basic authentication) and IP filtering.
35. The HIGH DEFINITION FIXED DOME shall support RTSP protocol based upon RFC 2326 and shall support the following options: Describe, Setup, Play, Teardown and Get-Parameter.
36. The HIGH DEFINITION FIXED DOME shall be capable of deterring brute force attacks. The camera shall recognize a brute force attack and refuse HTTP requests from an attacker's IP address for a preconfigured number of seconds. The camera shall determine that a brute force attack occurred when a client authentication error occurs five consecutive times.
37. The HIGH DEFINITION FIXED DOME shall support QoS technology using DSCP (Differentiated Services Code Point).
38. The HIGH DEFINITION FIXED DOME shall support HTTPS client authentication.
39. The HIGH DEFINITION FIXED DOME shall support 802.1X.
40. The HIGH DEFINITION FIXED DOME shall be compliant with the ONVIF (Open Network Video Interface Forum) specification.
41. The HIGH DEFINITION FIXED DOME shall have user configurable port settings.
42. The HIGH DEFINITION FIXED DOME shall be capable of dynamic IP address change notification. It shall accomplish this via an email to a specified address or by HTTP when its IP address changes.
43. The HIGH DEFINITION FIXED DOME shall have an email (SMTP) notification capability which allows the following:
  - i. Sending an email to pre-specified users when an alarm is triggered by either motion detection, VMFs, camera tampering detection, audio detection or sensor input. A JPEG image, which is linked with the alarm trigger, can be attached to the email.
  - ii. Periodically capturing a JPEG image and sending it via email.
44. The HIGH DEFINITION FIXED DOME shall have an integral 2.9X (3.1 to 8.9 mm) F1.2 to F2.1, IR compensated DC auto-iris type vari-focal lens. The HIGH DEFINITION FIXED DOME shall also have 4X digital zoom capability.
45. The HIGH DEFINITION FIXED DOME shall be Power over Ethernet (PoE) capable, compliant to the IEEE 802.3af standard.

46. The HIGH DEFINITION FIXED DOME shall be equipped with a built-in heater that is automatically activated when the internal temperature drops below a predefined threshold. The built-in heater is operational when the unit is powered by AC 24V or DC 12V.
47. The HIGH DEFINITION FIXED DOME shall have privacy zone masking which blocks out unwanted or prohibited area within the video image to protect privacy. Mask colors shall be Black, any of six (6) shades of Gray, White, Green, Yellow, Red, Cyan, Magenta, and Blue. The camera shall be capable of masking up to eight (8) areas. Such capability shall be via vendor supplied SNC toolbox utility software or the browser-based setup menu.
48. The SNC toolbox software includes the IP Setup (including group camera management) program, Firmware Upgrade Tool, Privacy Masking Tool, Custom Homepage Installer, and Group Camera Setting Scheduler. The SNC toolbox shall be supplied with the camera as a standard accessory in the CD-ROM.
49. The HIGH DEFINITION FIXED DOME shall have the capability to display a wide variety of overlays in any of seven positions on the video image (four corners, top, bottom, or center of the image).
50. The HIGH DEFINITION FIXED DOME shall have a 6-pin I/O interface on the camera unit that is accessible via a supplied pigtail. There shall be an alarm input port, and two alarm/relay output ports. The alarm input port shall be opto-isolated.
51. The HIGH DEFINITION FIXED DOME shall support IP Filtering, whereby access to the camera can be restricted to one or more groups of selected users. Up to ten (10) different groups can be established by defining an IP address range for each group.
52. The HIGH DEFINITION FIXED DOME shall be capable of limiting the bandwidth from 64 kbps to 8 Mbps in MPEG-4 or H.264, and from 0.5 Mbps to an unlimited bandwidth in JPEG.
53. The HIGH DEFINITION FIXED DOME shall have an internal image memory size of approx. 8 MB for buffering JPEG/MPEG-4/H.264 images and audio.
54. The HIGH DEFINITION FIXED DOME shall be capable of pre- and post-alarm buffering.
55. The pre-/post-alarm recording capabilities using an 'Image memory' function shall be as follows:
  - i. Capable of storing several seconds of pre-alarm and post-alarm images when an alarm is triggered by the motion detection, VMFs, camera tampering detection, audio detection or sensor input.
  - ii. Capable of recording image and sound files on the approx. 8 MB of built-in memory or transferring the files to an FTP server.
  - iii. Record in the codec format selected for monitoring.
  - iv. Have a maximum duration for pre- and post-alarm recording that shall be dependent on the bit rate setting (for MPEG-4/ H.264) or the picture quality and frame rate setting (for JPEG)

**B. CAMERA LENS SPECIFICATIONS:**

1. The HIGH DEFINITION FIXED DOME shall have an integrated 2.9X IR compensated DC auto-iris type vari-focal lens. The HIGH DEFINITION FIXED DOME shall also have 4X digital zoom capability.

2. Focal length shall be 3.1 to 8.9 mm with field of view coverage of 85.4° to 31.2°.
3. The aperture range for the lens shall be F1.2 to F2.1.

**VIDEO-ELECTRICAL REQUIREMENTS:**

1. The HIGH DEFINITION FIXED DOME input power shall be a power voltage of either AC 24V, DC 12V, or PoE (802.3af compliant).
2. The power connection shall be by means 2-pin Phoenix connector on a pig tail, for AC 24V and DC 12V operation.
3. The HIGH DEFINITION FIXED DOME shall have a composite analog video output in addition to streaming video via Ethernet. The composite analog video output can be used for monitoring while installing the camera to adjust the field of view and focus.
4. The analog video output of the HIGH DEFINITION FIXED DOME shall be selectable from either the NTSC or PAL standards.
5. Horizontal resolution shall be 600 TV lines when the camera is in 1280 x 1024 mode (5:4 aspect ratio).
6. The HIGH DEFINITION FIXED DOME shall require a minimum scene illumination of: 0.20 lx in color (F1.2, 50IRE [IP], View-DR Off, VE Off, AGC High, XDNR Middle) and 0 lx in B/W (F1.2, 50IRE [IP], View-DR Off, VE Off, AGC High, XDNR Middle, IR illuminators On), at either 1280 x 720 or 1280 x 1024 resolution.

**800-2.2 PAN/TILT/ZOOM (PTZ) DOME CAMERA**

4. The HIGH DEFINITION PTZ DOME shall be a Full HD Network Rapid Dome Camera supporting 3 codecs, JPEG, MPEG-4 and H.264, any two of which can be used simultaneously. The HIGH DEFINITION PTZ DOME shall utilize a 1/2.8-type, Exmor CMOS sensor of approx. 3.27 Megapixels and have a day/night capability.
5. The HIGH DEFINITION PTZ DOME shall be capable of 360° endless pan rotation and a tilt range of 210°, designed for ceiling mount operation. The HIGH DEFINITION PTZ DOME shall also have maximum pan/tilt speeds of 300° per second.
6. The HIGH DEFINITION PTZ DOME shall incorporate a built-in 20X optical, auto-focus zoom lens, and shall have 12X digital zoom capability.
7. The HIGH DEFINITION PTZ DOME shall have a Smartphone viewer, which can display the camera image and operate Pan/Tilt/Zoom (PTZ) on the smartphone.
8. The HIGH DEFINITION PTZ DOME shall be capable of an e-flip function, a feature when the camera passes the down position, electronically flips the image 180 degrees.
9. The HIGH DEFINITION PTZ DOME shall be capable of guard tour (position tour), for which up to 16 presets can be programmed, and moves to each preset sequentially when guard tour is activated. Up to 5 programs (tours) can be set. The HIGH DEFINITION PTZ DOME shall also have 256 user defined presets, with a repeatable mechanical preset accuracy of ±



- 0.045° (typical).
10. The HIGH DEFINITION PTZ DOME shall have a Wide-D capability (86 dB) that is achieved using Wide Dynamic Range technologies. (The maximum frame rate will be 15 fps when using Wide-D technology)
  11. Wide-D shall expand the video dynamic range of the camera to improve the visibility of images even in extremely high-contrast environments and shall also compensate for scenes with extremely poor contrast.
  12. Wide Dynamic Range shall reduce 'white-out' in high-contrast shooting environments, such as when the camera is located at the entrance of a building where there is a strong backlight. Wide Dynamic Range shall be available when the slow shutter is not used.
  13. The HIGH DEFINITION PTZ DOME shall have a NR (Noise Reduction) function, which can be selected among High, Middle, Low, and Off
  14. The HIGH DEFINITION PTZ DOME shall have a new "Advanced Auto" mode in White Balance setting, which can automatically adjust the color to be closest to the image you are viewing.  
When performing photography under a high pressure sodium vapor lamp, the HIGH DEFINITION PTZ DOME automatically switches to "Sodium vapour lamp" mode, which can provide natural images without any yellow tinge.
  15. The HIGH DEFINITION PTZ DOME shall have a "High sensitivity mode" in Picture tab of camera menu.  
It applies additional higher sensitivity gain as regular gain is increased, providing up to a 4X increase when gain is at the maximum level.
  16. The HIGH DEFINITION PTZ DOME shall a built-in SD/SDHC memory card slot for an on-board recording capability.  
The on-board recording function can be used only when the Intelligent Motion Detection (IMD) function or the tamper alarm function is not used.
  17. The network interface shall be via an 8-pin RJ-45 connector, 10Base-T / 100Base-TX Ethernet. Both IPv6 and IPv4 are supported.
  18. The HIGH DEFINITION PTZ DOME shall utilize JPEG, MPEG-4 and H.264 compression.  
The maximum resolution for each codec shall be 1920 x 1080.
  19. The maximum frame rate capability of the HIGH DEFINITION PTZ DOME over network shall be 30 frames per second in H.264, 20 frames per second in MPEG-4 and 16 frames per second in JPEG.
  20. The HIGH DEFINITION PTZ DOME shall have the capability of simultaneously encoding up to 2 of the following codecs in any combination: JPEG, MPEG-4, and/or H.264 including multiple instances of the same codec.
  21. Constant bit rate algorithm for JPEG data:  
The HIGH DEFINITION PTZ DOME shall be capable of equalizing JPEG data sizes to have stable bandwidth utilization. Data size for each compression level is as follows:

Level	Compression Ratio	Data Size (KB)				
		320 x 192	640 x 480	1280 x 720	1280 x 1024	1920 x 1080
1	1/60	3	15	44	62	98
2	1/50	3.5	18	53	75	119
3	1/40	4.4	22	55	94	148
4	1/35	5	25	75	107	170
5	1/30	5.8	29	89	124	197
6	1/25	7	35	110	150	242
7	1/20	8.7	44	130	188	303
8	1/15	12	59	180	262	409
9	1/10	17	87	270	384	597
10	1/6	30	150	480	673	1040

22. Actual frame rate in JPEG shall be shown in the tables below:

Resolution	320 x 192	640 x 480	768 x 576	1024 x 576	1280 x 720	1280 x 1024	1376 x 768	1440 x 912	1680 x 1056	1920 x 1080
Image Quality Level	Actual Output Frame Rate (fps)									
1	30	30	30	30	30	30	30	30	20	12
2	30	30	30	30	30	25	30	25	16	12
3	30	30	30	30	25	20	25	20	15	8
4	30	30	30	30	25	16	20	16	12	8
5	30	30	30	30	20	15	16	15	10	6
6	30	30	30	25	16	12	16	12	8	6
7	30	30	30	20	12	10	12	10	6	4
8	30	30	20	16	10	6	8	6	5	3
9	30	20	15	10	6	5	6	5	3	2
10	30	12	8	6	4	3	3	3	2	1

23. The supported operating systems shall be Microsoft Windows 7 32 bit/64 bit (Ultimate/Professional), Windows Vista 32 bit (Ultimate/Business), Windows XP 32 bit (Professional). Minimum PC requirements shall be the Intel Core2 Duo Processor, 2.33 GHz or higher, with 2 GB RAM or more supporting 1600 x 1200 or higher resolution (2560 x 1600 resolution or higher is recommended), 24-bit True Color display capability with Ethernet 100 Base-TX.
24. The HIGH DEFINITION PTZ DOME shall incorporate a built-in web server, such that the standard web browser Windows Internet Explorer (version 6.0, 7.0 or 8.0 recommended) can be used to access the camera without need for special viewer software.
25. The following web browsers can also be used to access the camera with the 'Plug-in Free' viewer: Firefox version 3.5, Safari version 4.0 and Google Chrome version 4.0. When using these browsers, the video is displayed in JPEG format.
26. The 'Plug-in Free' viewer also supports the Flash plug-in and ActiveX viewer, the latter allowing for MPEG-4 and H.264 video streams.
27. The HIGH DEFINITION PTZ DOME shall support ActiveX viewer which allows the camera image to be viewed in Internet Explorer, can display panorama images in 'Map View Mode'

- and 'Arctic View Mode', allows for recording of video and audio directly to the PC's hard drive, and supports direct audio from the PC mic to the camera.
28. The HIGH DEFINITION PTZ DOME shall be capable of supporting up to 5 users simultaneously over the network. The HIGH DEFINITION PTZ DOME shall have up to 6 user level settings.  
The administrator shall have complete access/control of the cameras. The other 5 levels of access can be set to limit user privileges to functions such as viewing, changing image size, etc.
  29. The HIGH DEFINITION PTZ DOME shall have the capability to stream MPEG-4 and H.264 video in TCP protocol or MPEG-4 and H.264 in UDP (unicast/multicast) protocol.
  30. The HIGH DEFINITION PTZ DOME shall have a camera tampering detection function that alerts the operator if the camera is tampered with. Tampering can include spraying the camera lens, covering it with a cloth, or changing the mounting direction.
  31. The HIGH DEFINITION PTZ DOME shall be capable of image cropping in all codecs, such that only the area of interest is transmitted, to reduce bandwidth and file storage requirements.
  32. The HIGH DEFINITION PTZ DOME shall support a letter box function. When the letter box function is enabled and resolutions except 16:9 aspect ratio are chosen, the displayed image will have mattes (black bars) on the top and bottom of the image and will not be stretched vertically.
  33. The HIGH DEFINITION PTZ DOME shall be capable of deterring brute force attacks.  
The camera shall recognize a brute force attack and refuse HTTP requests from an attacker's IP address for a preconfigured number of seconds. The camera shall determine that a brute force attack occurred when a client authentication error occurs five consecutive times.
  34. The HIGH DEFINITION PTZ DOME shall support HTTPS client authentication.
  35. The HIGH DEFINITION PTZ DOME shall support IEEE 802.1X.
  36. The HIGH DEFINITION PTZ DOME shall be compliant with the ONVIF (Open Network Video Interface Forum) specification version 1.02.
  37. The HIGH DEFINITION PTZ DOME shall have user configurable port settings.
  38. The HIGH DEFINITION PTZ DOME shall be capable of dynamic IP address change notification. It shall accomplish this via an email to a specified address or by HTTP when its IP address changes.
  39. The HIGH DEFINITION PTZ DOME shall have an email (SMTP) notification capability which allows the following:
    - i. Sending an email to pre-specified users when an alarm is triggered by either motion detection, camera tampering detection or sensor input. A JPEG image, which is linked with the alarm trigger, can be attached to the email.
    - ii. Periodically capturing a JPEG image and sending it via email.
  40. The HIGH DEFINITION PTZ DOME shall have an FTP client capability which allows the following:

- i. Transferring a JPEG image to a pre-specified FTP server when an alarm is triggered by either motion detection, camera tampering detection or sensor input.
  - ii. Periodically capturing a JPEG image and transferring it to the FTP server.
41. The HIGH DEFINITION PTZ DOME shall have an integral 20X (4.7 to 94 mm) F 1.6 to F 3.5, auto-focus zoom lens. The HIGH DEFINITION PTZ DOME shall also have 12X digital zoom capability.
42. The HIGH DEFINITION PTZ DOME shall be High Power over Ethernet (HPoE) capable, compliant to the IEEE 802.3at standard and shall be classified as Class 4.
43. The HIGH DEFINITION PTZ DOME shall have privacy zone masking which blocks out unwanted or prohibited area within the video image to protect privacy. Mask colors shall be Black, any of 6 shades of Gray, White, Green, Yellow, Red, Cyan, Magenta, and Blue. The camera shall be capable of masking up to 8 areas. Such capability shall be via vendor supplied SNC toolbox utility software or the browser-based setup menu.
44. The SNC toolbox software includes the IP Setup (including group camera management) program, Firmware Upgrade Tool, Panorama Creator, Privacy Masking Tool, Custom Homepage Installer, and Group Camera Setting Scheduler. The SNC toolbox shall be supplied with the camera as a standard accessory in the CD-ROM.
45. The HIGH DEFINITION PTZ DOME shall have an I/O interface located on the rear of the base. There shall be 2 alarm/sensor input ports, and 1 alarm/relay output port (mechanical relay outputs electrically isolated from the camera).
46. The HIGH DEFINITION PTZ DOME shall support IP Filtering, whereby access to the camera can be restricted to one or more groups of selected users. Up to 10 different groups can be established by defining an IP address range for each group.
47. The HIGH DEFINITION PTZ DOME shall be capable of limiting the bandwidth from 64 kbps to 8 Mbps in MPEG-4 or H.264, and from 0.5 Mbps to an unlimited bandwidth in JPEG.
48. The HIGH DEFINITION PTZ DOME shall have an internal image memory size of approx. 8 MB for buffering JPEG/MPEG-4/H.264 images and audio.
49. The HIGH DEFINITION PTZ DOME shall be capable of pre- and post-alarm buffering.
50. The pre-/post-alarm recording capabilities using an 'Image memory' function shall be as follows:
- i. Capable of storing several seconds of pre-alarm and post-alarm images when an alarm is triggered by the motion detection, camera tampering detection, or sensor input.
  - ii. Capable of recording image and sound files on the approx. 8 MB of built-in memory or SD/SDHC memory card (not supplied).
  - iii. Record in the codec format selected for monitoring.
  - iv. Have a maximum duration for pre- and post-alarm recording that shall be dependent on the bit rate setting (for MPEG-4/ H.264) or the picture quality and frame rate setting (for JPEG) as shown in the following tables:
51. The camera shall also have an 'Edge Storage' function that operates as follows:

- i. Capable of storing up to pre-alarm and post-alarm images and audio on a SD/SDHC memory card.
- ii. Record in the codec format selected for monitoring.
- iii. Recording to this storage area can be done manually or when an alarm is triggered.
- iv. The trigger can be based on sensor input or network disconnection, or a combination of those alarms using Boolean operands such as a logical 'AND', 'OR', or 'THEN'.
- v. Capable of streaming the recorded data using the same protocols as live streaming such as RTP/HTTP/TCP/IP or RTP/RTSP (IPv4), so that the user can view recorded image while recording.
- vi. Capable of simultaneously streaming live video with recorded video by using different sessions.
- vii. Capable of downloading the recorded video at a variety of speed rates such as 0.5x and 2x speed.

52. The HIGH DEFINITION PTZ DOME shall support IEEE 802.1X authentication, and shall:

- i. comply with the IEEE 802.1X standards,
- ii. be capable of being integrated into an IEEE 802.1X network to achieve high network security,
- iii. support EAP-TLS mode to use a key pair from a Certificate Authority (CA),
- iv. support EAP-MD5 mode,
- v. support PEAP mode.

C. Upon CGI command request, system log shall be recorded on a built-in flash memory (non volatile memory).

D. CAMERA LENS SPECIFICATIONS:

1. The HIGH DEFINITION PTZ DOME shall have an integrated 20X auto-focus zoom lens. The HIGH DEFINITION PTZ DOME shall also have 12X digital zoom capability.
2. Focal length shall be 4.7 to 94 mm with field of view coverage of 55.4° to 2.9°.
3. The integral lens shall be an IR compensated type lens.
4. The aperture range for the lens shall be F 1.6 to F 3.5.
5. The minimum object distance shall be 10 mm (wide) to 800 mm (tele).

E. VIDEO-ELECTRICAL SPECIFICATIONS:

1. The HIGH DEFINITION PTZ DOME input power shall be a power voltage of AC 24 V, or shall be HPoE (IEEE 802.3at compliant, Class 4).
2. The power connection shall be by means 2-pin Phoenix connector on a pigtail, for AC 24 V operation.
3. The HIGH DEFINITION PTZ DOME shall require a minimum scene illumination at either 1920 x 1080 resolution of:

Color:

1.7 lx (50IRE [IP], F 1.6, shutter 1/30 sec, AGC ON)

1.2 lx (30 IRE [IP], F 1.6, shutter 1/30 sec, AGC ON)

B/W:

0.30 lx (50 IRE [IP], F 1.6, shutter 1/30 sec, AGC ON, Night Mode)

0.18 lx (30 IRE [IP], F 1.6, shutter 1/30 sec, AGC ON, Night Mode)

4. Camera synchronization shall be Internal.
5. The HIGH DEFINITION PTZ DOME shall have an AGC capability up to 28 dB.
6. The video signal-to-noise ratio shall be more than 50 dB (AGC Off, Weight On).
7. The HIGH DEFINITION PTZ DOME shall have an 86dB wide dynamic range capability (theoretical) when the Wide Dynamic Range function is activated.
8. White balance shall be selected among Auto, Advanced Auto, Indoor, Outdoor, One push WB, ATW, Sodium vapour lamp, or Manual.
9. New Exposure shall be selected among Full auto, Shutter priority, Iris priority, or Manual when the Wide Dynamic Range is not used.
10. Power consumption for the HIGH DEFINITION PTZ DOME shall be 25 watts maximum.

**F. AUDIO SPECIFICATIONS:**

1. The HIGH DEFINITION PTZ DOME shall support bi-directional audio, using G.711 (64 kbps) and G.726 (40, 32, 24, 16 kbps) codecs.
2. The HIGH DEFINITION PTZ DOME shall have mini-jack connectors to support external microphone and active speakers. External microphone input shall be monaural, 2.2 kilo ohms, 2.5 V DC plug-in-power. Audio line output shall be also monaural which has a maximum output level of 1 Vrms.
3. The HIGH DEFINITION PTZ DOME shall be capable of storing up to 3 audio files. Audio files shall be generated and transferred to the camera using either the web browser or the manufacturer provided SNC audio upload tool software.
4. The HIGH DEFINITION PTZ DOME shall support the Voice alert function, which can automatically play an audio file stored on the camera by an alarm trigger using motion detection, camera tampering detection, or via a sensor input.
5. The HIGH DEFINITION PTZ DOME shall have the Dynamic Range Compressor which automatically controls microphone gain to optimize audio volume level.
6. The HIGH DEFINITION PTZ DOME shall provide time stamp on the streaming audio. Time stamp shall be inserted in the header area of the audio data.
7. Audio data shall be interleaved with video and serially transmitted in a single session for synchronization.

**G. MECHANICAL SPECIFICATIONS:**

1. The HIGH DEFINITION PTZ DOME shall have 360° endless pan rotation and 210° tilt range. The unit shall be designed for ceiling mount operation.
2. The HIGH DEFINITION PTZ DOME shall have maximum pan/tilt speeds of 300° per second and minimum pan/tilt speeds of 0.84° per second. The HIGH DEFINITION PTZ DOME shall have 256 user defined presets, with a repeatable mechanical preset accuracy of ± 0.045° (typical).
3. The HIGH DEFINITION PTZ DOME camera lens shall be an integrated 4.7 to 94 mm F 1.6 to F 3.5 auto-focus zoom lens.
4. The HIGH DEFINITION PTZ DOME shall have zoom movement speed as follows:  
  
Optical WIDE – Optical TELE  
2.3 sec (Focus Tracking ON)  
1.6 sec (Focus Tracking OFF)  
  
Optical WIDE – Digital TELE  
4.3 sec (30 p/60 p mode)  
4.9 sec (25 p/50 p mode)
5. The camera shall support one optically isolated sensor input, and two relay outputs. They shall be accessible via a supplied cable.

The HIGH DEFINITION PTZ DOME shall provide sensor in/relay out ports for interfacing with external equipment. The sensor input shall be configurable for either 'Normally Open' or 'Normally Closed' configuration.

**H. ENVIRONMENTAL SPECIFICATIONS:**

1. The HIGH DEFINITION PTZ DOME operating temperature shall be within the range of +23 °F to +122 °F (-5 °C to +50 °C). Cold start temperature must be greater than 32 °F (0 °C).
2. The HIGH DEFINITION PTZ DOME storage temperature shall be within the range of -4 °F to +140 °F (-20 °C to +60 °C).
3. The HIGH DEFINITION PTZ DOME operating humidity shall be within the range of 20 % to 80 % (non-condensing).
4. The HIGH DEFINITION PTZ DOME storage humidity shall be within the range of 20 % to 95 % (non-condensing)

**800-2.3 MANUFACTURERS**

- A. General: Provide material of types, sizes, capacities and electrical characteristics indicated above. Except as otherwise indicated, provide manufacturer's standard CCTV components as described by their published product information and install as recommended by manufacturer.
- B. Contractors seeking approval for a manufacturer not listed here must submit a point-by-point comparison of the proposed product with the specifications formatted to detail all specification items that do not comply, comply with or exceed the specifications. In order to allow the engineer time to evaluate the product, the request for approval of the

alternate vendor must be received from the contractor a minimum of two (2) weeks before bids are due. The engineer will issue an addendum notifying all bidders of the approval or rejection of the proposed alternate manufacturer within five (5) days of receiving the request. Inquires seeking approval of a product from a manufacturer or not following the format described above will be rejected.

1. Cameras:
  - a. Sony
  - b. Panasonic
  - c. Phillips
  - d. Honeywell
  - e. General Electric
  - f. Pelco
2. Camera Housings, Brackets and Mounts:
  - a. Sony
  - b. Pelco
  - c. Phillips
  - d. Honeywell
  - e. General Electric
3. Integrated Camera Pan Tilt Zoom and Housings
  - a. Sony
  - b. Pelco
  - c. Phillips
  - d. General Electric
  - e. Honeywell
4. Lenses:
  - a. Cannon
  - b. Fujinon
  - c. Rainbow
  - d. Computar
  - e. Tamron



## CONSTRUCTION METHODS

### 800-3.1 INSTALLATION OF CCTV SYSTEMS

- A. General: The Contractor shall investigate the site and become thoroughly familiar with the facility. The existing CCTV system must remain functional during the construction of this project. Any impairment or malfunction of the existing systems directly related to the installation of the new system shall be immediately repaired at the Contractor's expense.
- B. The CCTV system shall also be coordinated with the existing DVM system.
- C. Raceways: Contractor shall coordinate with the Engineer for exact location of all exterior building penetrations for CCTV conduit before proceeding. All conduits shall be concealed within the building structure where possible. Contractor shall obtain Engineer approval of any exposed conduit routing before installation. All wall penetrations by conduit or cable tray shall be sealed and fireproofed to retain original fire rating. Conduit size shall be 3/4-inch minimum to all CCTV devices, and shall be used for no other purpose. Any cutting of finished interior surfaces, to facilitate conduit running, shall be patched and repaired to the conditions that existed before the cutting.
- D. Facilities: The facility where this system is being installed is fully occupied and conducting the business of processing aircraft passengers and baggage, and hosting airport guests as well as retail businesses. The Contractor shall make provisions to coordinate with the Airport to minimize disruption of all airport operations. This may require parts of the installation being done in off-peak hours. All debris from the installation process shall be removed from the worksite immediately to minimize the potential for Foreign Objects of Destruction (FOD) being introduced into the Air Operations Area (AOA). Care shall be exercised at all times to protect the occupants and the facility from any damage. The area where the CCTV system is to be installed is a Security Identification Display Area (SIDA). The Contractor shall be required to obtain badges for all employees working on this job. A background investigation and training classes are required to obtain a badge. All costs associated with finger printing and training classes for this program are the responsibility of the Contractor.
- E. Approvals: Any variances from the locations shown for the CCTV equipment on the plans that exceed 10 feet in any direction shall be brought to the attention of the engineer before installing the equipment. Any field engineering or modification of standard mounting apparatus shall be brought to the attention of the engineer for approval before such modification is implemented. Sketches or diagrams of the modification may be requested and shall be considered part of this Contract. Samples of cables and coax with installed connectors shall be presented to the engineer for approval upon request. Once approved, any variance form the submitted samples must be approved by the engineer.
- F. Manufacturer's Instructions: Install CCTV systems and components where indicated, in accordance with equipment manufacturer's written instructions, in compliance with National Electrical Code, applicable local codes, and with recognized industry practices, to ensure that the television system complies with requirements and serves intended purposes.
- G. Contractor shall install all power, networking and communication cables as required for the complete and operational CCTV system. The location and routing of the cables shall be determined and approved by the Airport during construction. In addition, the Contractor shall furnish and install all power supplies, modems and enclosures as required by the CCTV camera manufacturers.

- H. Identification: Install permanent identification labels on all conduits, junction boxes, conductors, and termination blocks.
- I. Field Of View Adjustment: Aim each CCTV camera for the optimum view of the area that it is intended to cover, using a monitor to view the camera output. Final aiming shall be approved and accepted by the Airport.
- J. Touch Up Work: Touch-up scratched and marred surfaces to match original finishes; remove dirt and construction debris.

### **800-3.2 SYSTEM TESTING AND ACCEPTANCE**

- A. Upon installation of each camera perform an installation test. The installation test shall include confirmation of the field of view as scheduled and verification that video is being transmitted across the backbone fibers at correct levels per fiber optic module diagnostic indicators. Test all junctions from the input device to system output for intermittent connections and physical strength of junction.
- B. Any problems encountered during the installation, including damage to Airport equipment and CCTV elements during this test, will be documented and brought to the airports attention and corrected at Contractor's expense. The Contractor shall promptly correct all problems encountered, providing field service personnel appropriately trained for the types of problems encountered.
- C. The Contractor shall supply a form to be used during these tests for authorization, and initialing, by the Airport, or authorized representative, and the Contractor. This form shall clearly define the items tested, leaving room for the date, CCTV element designation, confirmation of field of view, and initials. All CCTV functions shall be demonstrated to ensure operation as required by these Specifications and Drawings.

### **800-3.3 OPERATION AND MAINTENANCE MANUALS**

- A. The intent of this Section is to require complete documentation of the CCTV System for purposes of system operation and maintenance during and after the warranty period. The operation and maintenance manuals shall be exhaustive in the coverage of the system to the extent that they may be used as the sole guide to the troubleshooting, identification and repair of defective parts.
- B. The Contractor shall provide four (4) complete Drawing books and maintenance and operation manuals on the completed system. These manuals shall include specific wiring diagrams, schematics, and functional details such that going to the actual equipment and making reference to this manual may easily identify any component, wire, or piece of equipment in the system. It is required that everything in the system be neatly labeled and easily identifiable. Every terminal, wire, component, or piece of equipment, and other such items shall have a number or letter designation. All of these identification characteristics shall be included in the maintenance and operation manuals. The Contractor shall provide one (1) set of all Drawings as vellums, and where the Drawings are CAD generated, provide the Drawing files in AutoCAD 2012 format. Provide one (1) set of all schedules and tables in Microsoft Excel format.
- C. The maintenance manual requirement of this Section is in addition to shop Drawing requirements. Maintenance manuals and Drawing sets shall be compiled after system fabrication and testing, and shall incorporate any changes made after shop Drawing submittal. The maintenance manuals and Drawing books shall be permanently bound in hard plastic covers.

- D. Provide manufacturer's standard literature, covering all equipment included in the system. Maintenance manuals shall contain Specifications, adjustment procedures, circuit schematics, component location diagrams, and recommended replacement parts. References to equipment, not used in this project, shall be crossed out.
- E. Drawing Books: All Drawings developed specifically for this project shall be reduced to 11" x 17", folded and bound with hard plastic covers. Provide component identification and cross reference on the Drawings to allow the maintenance department to understand the function of each item (the block Diagram), find the room where the device is mounted (Contract document plans), find its location in a rack (arrangement Drawings), find how it is wired (wiring diagrams), find its detailed Specifications (vendor data sheets), and how to repair it (spare part lists). Provide the following Drawings as a minimum:
  - 1. Functional Block Diagram, an overall block diagram showing the major inter-connections between subsystems components.
  - 2. Arrangement Drawings showing the physical arrangement of all major system components.
  - 3. Elevation Drawings of all equipment racks showing the location of each component in the racks. Components in the racks shall be identified as in the functional block diagrams. Drawing shall show the routes of all cables connecting its components.
  - 4. Wiring Diagrams showing all interconnecting wiring. Wire identification on the diagrams shall agree with the wire markers installed on the equipment.
- F. Submit lists of proposed manufacturer's recommended spare parts to maintain the complete CCTV system with a minimum of down time. This list shall include part names, part numbers, and source for additional purchase. The parts list shall be cross-referenced to the functional block diagrams and the product data.
- G. Special Tools List: Submit a list of special tools required to maintain the CCTV system. Include on the list the name, part number, and source for all special tools.
- H. Special Test Equipment List: Submit a list of special test equipment required to prove that all components of the system are functioning per Specification.

#### **800-3.4 TRAINING**

- A. Provide CCTV system operation and administration/ maintenance training for the Airport Operations Department personnel. The training shall not be generic in nature, but must be customized to relate to Rockford Airport operations.
- B. Two categories of system training shall be provided. System operational training shall be provided for a maximum of five (5) administration/operations personnel and maintenance training for a maximum of two (2) maintenance personnel. This training shall permit the Airport maintenance personnel to provide basic service to the system related to day-to-day facility maintenance projects without voiding the warranty.
- C. Training shall be provided multiple times and at the intervals specified below. One (1) session shall be provided during daytime working hours, and one (1) session during evening working hours, with specific days, work shifts, and hours for training to be selected by the Airport.
- D. Training must be in a modular format and shall provide separate areas of training materials specific to the airport's administration, operation, and maintenance.

1. System Pre-Acceptance training shall be provided when the system is capable of providing beneficial use to the airport.
  2. Follow-up Training, Session, shall be provided between fifteen (15) and thirty (30) days after pre-acceptance training, with times and dates to be selected by the Airport.
- E. Provide customized, Rockford Airport specific training materials for each attendee to use at each training session and to keep for reference. Provide five (5) copies of each piece of training material used at each session to the Airport Operations Department at the completion of each training session for their future use.

### **800-3.5 ACCEPTANCE**

- A. Acceptance will be withheld until the successful completion of the following:
1. Acceptance of all submittals
  2. Delivery of final documentation
  3. Approval of camera aiming
  4. Successful testing
  5. Successful training

### **METHOD OF MEASUREMENT**

#### **800-4.1**

The proposed CCTV Security System Upgrades shall include all material and labor required for the installation of the new pole mounted CCTV cameras, pole mounted enclosures including fiber modem and power supplies, hardware, software, training, manuals, system integration, testing cable/conduit and associated items required for a complete and operational system.

### **BASIS OF PAYMENT**

#### **800-5.1**

Payment will be at the contract unit price per lump sum or each as described below, complete and accepted for each item. This price shall be compensation in full for all preparation, assembly, removal, materials, labor, equipment, tools and incidentals necessary to complete the item as specified herein or as directed by the Engineer.

Payment will be made under:

**ITEM AR800097      CCTV SECURITY SYSTEM UPGRADES – PER LUMP SUM.**

## **ITEM 800098 – INFORMATION SIGN**

### **DESCRIPTION**

#### **800-1.1 GENERAL**

The new Information Sign specified herein is intended to be complete, installed with all electrical and control cable terminated and ready for use. The new Information Sign shall include all support structures, concrete foundations and mounting hardware and posts as shown on the plans and specified herein.

The successful bidder shall prepare detailed schematic shop drawings and sketches for the proposed Information Sign. The detailed shop drawings shall include the proposed mounting structure, foundations, connections, materials types and colors as well as all electrical, communication and control cable details necessary for construction of the completed and operational Information Sign. Detail drawings including a complete list of equipment and material, including manufacturer's descriptive and technical literature, performance charts and curves, catalog cuts, and installation instructions. Detail drawings shall contain mounting details, foundation design, material information, complete wiring and schematic diagrams and any other details required to demonstrate that the system has been coordinated and will properly function with its associated system. Alternate sign configurations may be considered provided the general configuration, design and function is acceptable to the owner. The owner will be the sole judge in determining the acceptability of alternate designs proposed by the successful bidder. All alternate designs and configurations, including but not limited to an change or addition in power and fiber optic cables as shown on the plans shall be provided at no additional cost to the bid unit price of the Information Sign.

#### **800-1.2 SYSTEM DESCRIPTION**

The new Information Sign shall be a high contrast full matrix LED signs, amber monochrome in color mounted back to back (2 each signs shall be mounted back to back to complete the one sign specified herein). The new Information Sign shall have a 70 degree viewing cone and a minimum 6" character height. The Sign shall be automatic dimming from 0 to 100%. The Sign shall be Daktronics VL-3500, 2'9" x 5'9" x 8" with 4 lines and 16 characters wide, pixel pitch of 20 mm center to center, dynamic message sign or approved equal. The new Information Sign shall be complete with all mounting hardware and posts, cabling, handholes, terminations and connections to the Airport network, PCC foundations and anchor hardware as detailed, posts and panels, operation software and computer connections to the existing airport network. The new information sign shall operate on 120/240V, single phase, 3 wire system. The new information sign shall be furnished with Fiber Optic communication option. This option shall be capable of integrating into Airports existing Local Area Network for programming and re-programming of messages to be displayed on the signs. The LED signs shall be manufactured by Watchfire, Daktronics or approved equal.

#### **800-1.3 ENVIRONMENTAL REQUIREMENTS**

The Information Sign, necessary components and cable shall be capable of being used outdoors and shall be rated for continuous operation under ambient environmental conditions of 0 to 50°C (35 to 120°F) dry bulb and 0 to 95 percent relative humidity, noncondensing. Equipment shall be rated for continuous operation under the ambient environmental temperature, pressure, humidity, and vibration conditions specified or normally encountered for the installed location. The Information Sign for outdoor installation shall be rated for minus 40 to plus 60°C minus 40 to plus 140°F. The new

information sign supplier/manufacturer shall be responsible to design and install any additional vents and fans required for heat rejection between two sign panels.

#### **800-1.4 GROUP V TECHNICAL DATA PACKAGE**

The Group V package consists of the operation and maintenance data, in manual format. Final copies of the manuals bound in hardback, loose-leaf binders, shall be delivered to the Government within 30 days after completing the endurance test. The draft copy used during site testing shall be updated with any changes required prior to final delivery of the manuals. Each manual's contents shall be identified on the cover. The manuals shall include the names, addresses, and telephone numbers of each subcontractor installing equipment and systems, and of the nearest service representative for each item of equipment and each system. The manuals shall have a table of contents and tab sheets. Tab sheets shall be placed at the beginning of each chapter or section and at the beginning of each appendix. The final copies delivered after completion of the endurance test shall include all modifications made during installation, checkout, and acceptance. Manuals delivered shall include:

- a. Functional Design Manual: two copies.
- b. Hardware Manual: two copies.
- c. Operator's Manual: four copies.
- d. Maintenance Manuals: four copies.

#### **800-1.6 FUNCTIONAL DESIGN MANUAL**

The functional design manual shall identify the operational requirements for the data transmission system and explain the theory of operation, design philosophy, and specific functions. A description of hardware functions, interfaces, and requirements shall be included for all system operating modes.

#### **800-1.7 HARDWARE MANUAL**

A manual describing equipment furnished, including:

- a. General description and specifications.
- b. Installation and checkout procedures.
- c. Equipment electrical schematics and layout drawings.
- d. Data transmission systems schematics.
- e. Alignment and calibration procedures.
- f. Manufacturer's repair parts list indicating sources of supply.

#### **800-1.8 OPERATOR'S MANUAL**

The operator's manual shall fully explain procedures and instructions for operation of the system.

#### **800-1.9 MAINTENANCE MANUAL**

The maintenance manual shall include descriptions of maintenance for all equipment including inspection, periodic preventative maintenance, fault diagnosis, and repair or replacement of defective components.

## **PART 2 PRODUCTS**

### **800-2.1 FOUNDATIONS**

The foundations shall be constructed of Portland Cement Concrete conforming to Item 610 of these specifications. Steel reinforcing shall conform to the details provided on the plans and shall meet ASTM A 706, Grade 60 deformed bars.

### **800-2.2 METAL SIGN FRAME AND POSTS**

The metal sign frame and posts shall as detailed on the plans and shall be heavy duty steel members with one coat of primer paint and two coats of black powder coat paint factory applied with a baked enamel finish, approved by the owner. All mounting hardware shall be painted to match the framework and shall have matching hardware covers to conceal the fasteners.

### **800-2.3 CABLING AND CONNECTIONS**

The contractor shall install one 20A, 2-pole NEMA 3R disconnect at the sign for termination of the power conductors. The contractor shall also install junction boxes and enclosures as required by the sign manufacturer/supplier to terminate fiber optic cable at the sign. The flexible conduit for power and fiber optic cables shall be installed per the sign manufacturer/supplier requirements.

### **800-2.6 ENCLOSURES**

Enclosures shall conform to the requirements of NEMA 250 for the types specified. Finish color shall be the manufacturer's standard, unless otherwise indicated. Damaged surfaces shall be repaired and refinished using original type finish.

The sign shall be continuously cooled with forced air ventilation. Each sign shall have a full access panel easily accessible for servicing.

## **CONSTRUCTION METHODS**

### **800-3.1 INSTALLATION**

System components and appurtenances shall be installed in accordance with the manufacturer's instructions and as shown. Interconnections, services, and adjustments required for a complete and operable dynamic message sign shall be provided.

#### **800-3.1-1 SIGN ELECTRICAL AND COMMUNIIATION WORK**

Power and communication cable installation and applications shall meet the requirements of NFPA 70, Article 770, Sections 52 and 53. Cables not installed in conduits or wireways shall be properly secured and neat in appearance, and if installed in plenums or other spaces used for environmental air, shall comply with NFPA 70 requirements for this type of installation.

### **800-3.1-2 EXTERIOR UNDERGROUND CABLE**

Power and communication cables installed between the Terminal Building and new information sign shall be as specified in section 108 and 800178.

### **800-3.1-3 ENCLOSURE SIZING AND CABLE**

Termination enclosures shall be sized to accommodate the FO equipment to be installed. Sizing shall include sufficient space for service loops to be provided and to accommodate a neat, workmanlike layout of equipment and the bend radii of fibers and cables terminated inside the enclosure.

### **800-3.1-4 ENCLOSURE PENETRATIONS**

Enclosure penetrations shall be from the bottom and shall be sealed with rubber silicone sealant to preclude the entry of water. Conduits rising from underground shall be internally sealed.

## **800-3.2 TESTING**

### **800-3.2-1 GENERAL**

The Contractor shall provide personnel, equipment, instrumentation, and supplies necessary to perform testing.

### **800-3.2-2 CONTRACTOR'S FIELD TEST**

The Contractor shall verify the complete operation of the new information sign in conjunction with field testing associated with systems supported by the fiber optic data transmission system prior to formal acceptance testing.

## **METHOD OF MEASUREMENT**

### **800-4.1**

No direct measurement shall be made for the Information Sign. The required cable, conduit and cable connections and terminations shall be measured separately within their respective sections. No measurement will be made for any individual items necessary to complete the installation of the INFORMATION SIGN but, shall be considered incidental to this item. The Information Sign shall include all items necessary to complete the new Information Sign including but, not limited to foundations and reinforcement steel, steel support members, connectors, electronic signs (2 each required), terminations, trim, disconnects, cabling, junction boxes and disconnects, software, programming and any necessary appurtenant equipment and incidentals.

The cost of routing the power and fiber optic cable through duct, testing and all connections shall be included in the unit price bid for the cable.



The cost of routing the power and fiber optic cables inside the terminal building, fiber/Ethernet switch and all conduits shall be included in the lump sum bid price for the pay item "AS800089 TERMINAL BUILDING MODIFICATIONS".

**BASIS OF PAYMENT**

**800-5.1**

Payment will be made at the contract unit price per lump sum for Information Sign. This price shall be full compensation for furnishing all materials and construction of the Information Sign as detailed and specified herein for all labor, equipment, tools and necessary incidentals to complete the this item.

Payment will be made under:

**ITEM AS800098      INFORMATION SIGN – PER LUMP SUM.**

## **ITEM 800178 – FIBER OPTIC DATA TRANSMISSION SYSTEM**

### **DESCRIPTION**

#### **800-1.1 GENERAL**

Detail drawings including a complete list of equipment and material, including manufacturer's descriptive and technical literature, performance charts and curves, catalog cuts, and installation instructions. Detail drawings shall contain complete wiring and schematic diagrams and any other details required to demonstrate that the system has been coordinated and will properly function with its associated system.

#### **800-1.2 ENVIRONMENTAL REQUIREMENTS**

Equipment and cable to be utilized indoors shall be rated for continuous operation under ambient environmental conditions of 0 to 50°C (35 to 120°F) dry bulb and 10 to 95 percent relative humidity, noncondensing. Equipment shall be rated for continuous operation under the ambient environmental temperature, pressure, humidity, and vibration conditions specified or normally encountered for the installed location. Fiber optic cable for outdoor installation shall be rated for minus 40 to plus 60°C minus 40 to plus 122°F.

#### **800-1.3 ELECTRICAL REQUIREMENTS**

The equipment shall operate from a voltage source as shown, plus or minus 10 percent, and 60 Hz, plus or minus 2 percent.

#### **800-1.4 GROUP V TECHNICAL DATA PACKAGE**

The Group V package consists of the operation and maintenance data, in manual format. Final copies of the manuals bound in hardback, loose-leaf binders, shall be delivered to the Government within 30 days after completing the endurance test. The draft copy used during site testing shall be updated with any changes required prior to final delivery of the manuals. Each manual's contents shall be identified on the cover. The manuals shall include the names, addresses, and telephone numbers of each subcontractor installing equipment and systems, and of the nearest service representative for each item of equipment and each system. The manuals shall have a table of contents and tab sheets. Tab sheets shall be placed at the beginning of each chapter or section and at the beginning of each appendix. The final copies delivered after completion of the endurance test shall include all modifications made during installation, checkout, and acceptance. Manuals delivered shall include:

- e. Functional Design Manual: two copies.
- f. Hardware Manual: two copies.
- g. Operator's Manual: four copies.
- h. Maintenance Manuals: four copies.

#### **800-1.5 FUNCTIONAL DESIGN MANUAL**

The functional design manual shall identify the operational requirements for the data transmission system and explain the theory of operation, design philosophy, and specific functions. A description of hardware functions, interfaces, and requirements shall be included for all system operating modes.

## **800-1.6 HARDWARE MANUAL**

A manual describing equipment furnished, including:

- g. General description and specifications.
- h. Installation and checkout procedures.
- i. Equipment electrical schematics and layout drawings.
- j. Data transmission systems schematics.
- k. Alignment and calibration procedures.
- l. Manufacturer's repair parts list indicating sources of supply.

## **800-1.7 OPERATOR'S MANUAL**

The operator's manual shall fully explain procedures and instructions for operation of the system.

## **800-1.98 MAINTENANCE MANUAL**

The maintenance manual shall include descriptions of maintenance for all equipment including inspection, periodic preventative maintenance, fault diagnosis, and repair or replacement of defective components.

## **PART 2 PRODUCTS**

### **800-2.1 ENCLOSURES**

Enclosures shall conform to the requirements of NEMA 250 for the types specified. Finish color shall be the manufacturer's standard, unless otherwise indicated. Damaged surfaces shall be repaired and refinished using original type finish.

### **800-2.2 OPTICAL FIBERS**

#### **800-2.2-1 GENERAL**

Optical fibers shall be coated with a suitable material to preserve the intrinsic strength of the glass. The outside diameter of the glass-cladded fiber shall be nominally 125 microns, and shall be concentric with the fiber core. Optical fibers shall meet EIA ANSI/EIA/TIA-455-46A, and EIA ANSI/TIA/EIA-455-177A.

#### **800-2.2-2 62.5 MICRON MULTIMODE FIBERS**

Conductors for the airfield lighting control and monitoring system shall be multimode, graded index, solid glass waveguides with a nominal core diameter of 62.5 microns. The fiber shall have transmission windows centered at 850 and 1330 nanometer wavelengths. The numerical aperture for each fiber shall be a minimum of 0.275. The attenuation at 850 nanometers shall be 4.0 dB/Km or less. The attenuation at 1330 nanometers shall be 1.5 dB/Km or less. The minimum bandwidth shall be 160 MHz-Km at 850 nanometers and 400 MHz-Km at 1300 nanometers. FO cable shall be certified to meet EIA ANSI/EIA/TIA-455-30B and EIA ANSI/EIA/TIA-455-58A.

## **800-2.3 PATCH PANELS**

Patch panels shall be a complete system of components by a single manufacturer, and shall provide termination, splice storage, routing, radius limiting, cable fastening, storage, and cross-connection. Patch panel connectors and couplers shall be the same type and configuration as used elsewhere in the system.

## **800-2.4 CABLE CONSTRUCTION**

### **800-2.4-1 GENERAL**

The cable shall contain a minimum of two fiber optic conductors for each full duplex circuit. The number of fibers in each cable shall be as shown. Each fiber shall be protected by a protective tube. Cables shall have a jacketed strength member, and an exterior jacket. Cable and fiber protective covering shall be free from holes, splits, blisters, and other imperfections. The covering shall be flame retardant, moisture resistant, non-nutrient to fungus, ultraviolet light resistant as specified and nontoxic. Mechanical stress present in cable shall not be transmitted to the optical fibers. Strength members shall be non-metallic and shall be an integral part of the cable construction. The combined strength of all the strength members shall be sufficient to support the stress of installation and to protect the cable in service. The exterior cables shall have a minimum storage temperature range of minus 20 to plus 70°C, (minus 40 to plus 167°F). Interior cables shall have a minimum storage temperature of minus 10 to plus 75°C, (plus 14 to plus 167°F). All cable furnished shall meet the requirement of NFPA 70. Fire resistant characteristics of cables shall conform to Article 770, Sections 49, 50, and 51. A flooding compound shall be applied into the interior of the fiber tubes, into the interstitial spaces between the tubes, to the core covering, and between the core covering and jacket of all cable to be installed aerially, underground, and in locations susceptible to moisture. Flooded cables shall comply with EIA ANSI/EIA-455-81A-91 and EIA ANSI/EIA/TIA-455-82B. Cables shall be from the same manufacturer, of the same cable type, and of the same size. Each fiber and protective coverings shall be continuous with no factory splices. Fiber optic cable assemblies, including jacketing and fibers, shall be certified by the manufacturer to have a minimum life of 30 years. Plenum cable shall meet UL 910, and riser cable shall meet UL 1666. FO cable shall be certified to meet the following: EIA ANSI/TIA/EIA-455-13A, EIA ANSI/EIA/TIA-455-25B, EIA ANSI/TIA/EIA-455-41A, EIA ANSI/EIA/TIA-455-47B, EIA ANSI/EIA/TIA-455-59, EIA ANSI/EIA/TIA-455-61, EIA-455-88, EIA ANSI/EIA-455-91, EIA ANSI/TIA/EIA-455-104A, AND EIA ANSI/EIA-455-171.

### **800-2.4-2 INTERIOR CABLE**

- a. Loose buffer tube cable construction shall be such that the optical fibers shall be surrounded by a tube buffer, shall be contained in a channel or otherwise loosely packaged to provide clearance between the fibers and the inside of the container to allow for thermal expansions without constraining the fiber. The protective container shall be extruded from a material having a coefficient of friction sufficiently low to allow the fiber free movement. The cable outer jacket shall be flame retardant polyvinyl chloride (PVC) or fluorocopolymer (FCP), which complies with NFPA 70 for OFNP applications. Tensile strength, impact resistance, and crush resistance shall not exceed manufacturers' recommendations.
- b. Tight buffer tube cable construction shall be extrusion of plastic over each clad fiber, with an outer jacket of flame retardant PVC or FCP, which complies with NFPA 70 for OFNR requirements for riser cables and vertical shaft installations. Optical fibers shall be covered in near contact with an extrusion tube and shall have an intermediate soft buffer to allow for the

thermal expansions and minor pressures. Tensile strength, impact resistance, and crush resistance shall not exceed manufacturer's recommendations.

- c. Plenum Rated Cables: Cable to be installed inside plenums shall additionally meet the requirements of UL 910.

### **800-2.4-3 PIGTAIL CABLES**

Cable used for connections to equipment shall be flexible fiber pigtail cables having the same physical and operational characteristics as the parent cable. The cable jacket shall be flame retardant PVC or FCP, which complies with NFPA 70 for OFNP applications. Maximum dB loss for pigtail cable shall be 3.5 dB/km at 850 nanometers, and 1.0 dB/km at 1330 nanometers.

### **800-2.5 FO CONNECTORS**

FO connectors shall be the straight tip, bayonet style, field installable, self-aligning and centering. FO connectors shall match the fiber core and cladding diameters. The connector coupler shall be stainless steel and the alignment ferrule shall be ceramic. FO equipment and cable shall use the same type connectors. Connector insertion loss shall be nominally 0.3 dB and less than 0.7 dB.

## **PART 3 EXECUTION**

### **800-3.1 INSTALLATION**

System components and appurtenances shall be installed in accordance with the manufacturer's instructions and as shown. Interconnections, services, and adjustments required for a complete and operable data transmission system shall be provided.

#### **800-3.1-1 INTERIOR WORK**

Cable installation and applications shall meet the requirements of NFPA 70, Article 770, Sections 52 and 53. Cables not installed in conduits or wireways shall be properly secured and neat in appearance, and if installed in plenums or other spaces used for environmental air, shall comply with NFPA 70 requirements for this type of installation.

#### **800-3.1-2 EXTERIOR UNDERGROUND CABLE**

Except as otherwise specified, all underground FO Cable shall be installed in existing ducts/conduits.

- a. For cables installed in ducts and conduit, a cable lubricant compatible with the cable sheathing material shall be used on all cables pulled. Pulling fixtures shall be attached to the cable strength members. If indirect attachments are used, the grip diameter and length shall be matched to the cable diameter and characteristics. If an indirect attachment is used on cables having only central strength members, the pulling forces shall be reduced to ensure that the fibers are not damaged from forces being transmitted to the strength member. During pulling the cable pull line tension shall be continuously monitored using dynamometers or load-cell instruments, and shall not exceed the maximum tension specified by the cable manufacturer. The mechanical stress placed upon the cable during installation shall be such that the cable is not twisted or stretched. A cable feeder guide shall be used between the cable reel and the face of the duct or conduit to

protect the cable and guide it into the duct or conduit as it is unspooled from the reel. As the cable is unspooled from the reel, it shall be inspected for jacket defects or damage. The cable shall not be kinked or crushed and the minimum bend radius of the cable shall not be exceeded during installation. Cable shall be hand fed and guided through each manhole and additional lubricant shall be applied at all intermediate manholes. When practicable, the center pulling technique shall be used to lower pulling tension. That is, the cable shall be pulled from the center point of the cable run towards the end termination points. The method may require the cable to be pulled in successive pulls. If the cable is pulled out of a junction box or manhole the cable shall be protected from dirt and moisture by laying the cable on a ground covering.

### **800-3.1-1 SERVICE LOOPS**

Each fiber optic cable shall have service loops of not less than 3 meters (9.8 feet) in length at each end. The service loops shall be housed in a service loop enclosure.

### **800-301-4 METALLIC SHEATH GROUNDING**

Fiber optic cable with metallic sheath routed in the trench with a power cable shall have the metallic sheath grounded at the cable termination points.

### **800-3.1-5 SPLICES**

No splices will be permitted unless the length of cable being installed exceeds the maximum standard cable length available from a manufacturer or unless fiber optic pigtails are used to connect transmitters, receivers, or other system components for terminations to the fiber. Splices shall be made using the method recommended by the cable manufacturer. Splices shall be housed in a splice enclosure and shall be encapsulated with an epoxy, ultraviolet light cured splice encapsulant or otherwise protected against infiltration of moisture or contaminants. FO splices shall be field tested at the time of splicing. Fusion splices shall have less than 0.2 dB loss.

Mechanical splices shall have less than 0.5 dB loss. There shall be no more than 1 splice per kilometer (0.62 mile) in any of the FO cables excluding terminations. Field splices shall be located in cable boxes. Sufficient cable shall be provided in each splicing location to properly rack and splice the cables, and to provide extra cable for additional splices. Cable ends shall be protected with end caps except during actual splicing. During the splicing operations, means shall be provided to protect the unspliced portions of the cable and its fibers from the intrusion of moisture and other foreign matter.

### **800-3.1-6 CONNECTORS**

Connectors shall be as specified in paragraph FO CONNECTORS. Fibers at each end of the cable shall have jumpers or pigtails installed of not less than 1 meter (3 feet) in length. Fibers at both ends of the cable shall have connectors installed on the jumpers. The mated pair loss, without rotational optimization, shall not exceed 1.5 dB. The pull strength between the connector and the attached fiber shall not be less than 22.7 kilograms (50) pounds.

### **800-3.1-7 IDENTIFICATION AND LABELING**

Identification tags or labels shall be provided for each cable. Markers, tags and labels shall use indelible ink or etching which will not fade in sunlight, or in buried or underground applications.

Markers, tags, and labels shall not become brittle or deteriorate for a period of 20 years. Label all termination blocks and panels with cable number or pair identifier for cables in accordance with EIA ANSI/TIA/EIA-606 and as specified. The labeling format shall be identified and a complete record shall be provided to the Owner with the final documentation. Each cable shall be identified with type of signal being carried and termination points.

### **800-3.1-8 ENCLOSURE SIZING AND CABLE**

Termination enclosures shall be sized to accommodate the FO equipment to be installed. Sizing shall include sufficient space for service loops to be provided and to accommodate a neat, workmanlike layout of equipment and the bend radii of fibers and cables terminated inside the enclosure.

### **800-3.1-9 ENCLOSURE PENETRATIONS**

Enclosure penetrations shall be from the bottom and shall be sealed with rubber silicone sealant to preclude the entry of water. Conduits rising from underground shall be internally sealed.

### **800-3.2 TESTING**

#### **800-3.2-1 GENERAL**

The Contractor shall provide personnel, equipment, instrumentation, and supplies necessary to perform testing.

#### **800-3.2-2 CONTRACTOR'S FIELD TEST**

The Contractor shall verify the complete operation of the data transmission system in conjunction with field testing associated with systems supported by the fiber optic data transmission system prior to formal acceptance testing. Field tests shall include a flux density test. These tests shall be performed on each link and repeated from the opposite end of each link.

##### **800-3.2-2.1 OPTICAL TIME DOMAIN REFLECTOMETER TESTS**

Optical time domain reflectometer tests shall be performed using the FO test procedures of EIA ANSI/EIA/TIA-455-59. An optical time domain reflectometer test shall be performed on all fibers of the FO cable on the reel prior to installation. The optical time domain reflectometer shall be calibrated to show anomalies of 0.2 dB as a minimum. Photographs of the traces shall be furnished to the Owner. An optical time domain reflectometer test shall be performed on all fibers of the FO cable after it is installed. The optical time domain reflectometer shall be calibrated to show anomalies of 0.2 dB as a minimum. If the optical time domain reflectometer test results show anomalies greater than 1 dB, the FO cable segment is unacceptable to the Owner. The unsatisfactory segments of cable shall be replaced with a new segment of cable. The new segment of cable shall then be tested to demonstrate acceptability. Photographs of the traces shall be furnished to the Government for each link.

### **800-3.2-2.2 POWER ATTENUATION TEST**

Power attenuation test shall be performed at the light wavelength of the transmitter to be used on the circuit being tested. The flux shall be measured at the FO receiver end and shall be compared to the flux injected at the transmitter end. There shall be a jumper added at each end of the circuit under test so that end connector loss shall be validated.

Rotational optimization of the connectors will not be permitted. If the circuit loss exceeds the calculated circuit loss by more than 2 dB, the circuit is unsatisfactory and shall be examined to determine the problem. The Owner shall be notified of the problem and what procedures the Contractor proposes to eliminate the problem. The Contractor shall prepare and submit a report documenting the results of the test.

### **800-3.2-2.3 GAIN MARGIN TEST**

The Contractor shall test and verify that each circuit has a gain margin which exceeds the circuit loss by at least 6 dB.

### **800-3.2-2.5 PERFORMANCE VERIFICATION TEST AND ENDURANCE TEST**

The FO data transmission system shall be tested as a part of the completed airfield lighting control system and Ethernet network system during the Performance Verification Test and Endurance Test.

### **800-3.1 TRAINING**

#### **800-3.3-4 GENERAL**

The Contractor shall conduct a training course for designated personnel in the maintenance of the FO system. The training shall be oriented to the specific system being installed under this specification. The Contractor shall furnish training materials and supplies.

#### **800-3.3-2 MAINTENANCE PERSONNEL TRAINING**

The system maintenance course shall be taught at the project site after completion of the endurance test for a period of 1 training day. A maximum of five personnel designated by the Owner will attend the course. A training day shall be 8 hours of classroom or lab instruction, including two 15-minute breaks and excluding lunchtime during the daytime shift in effect at the facility. Training shall include:

- a. Physical layout of the system and each piece of hardware.
- b. Troubleshooting and diagnostics procedures.
- c. Repair instructions.
- d. Preventative maintenance procedures and schedules.
- e. Calibration procedures. Upon completion of this course, the students shall be fully proficient in the maintenance of the system.



**METHOD OF MEASUREMENT**

**800-4.1**

The length of 1-6 strand multi-mode fiber optic cable installed in the conduit or to be paid for, shall be the number of lineal feet measured in place, completed and ready for operation, and accepted as satisfactory, and no extra quantity will be allotted for any vertical distances or the required cable slack. There will be a separate measurement made for each cable installed in conduit.

The cost of routing the fiber optic cable through duct, troughs, cable chase, terminations, patch panels, testing and all connections shall be included in the unit price bid for the cable.

The length of fiber optic cable installed inside the Terminal Building will not be measured for payment, it shall be incidental to the pay items "AR800089 TERMINAL BUILDING MODIFICATIONS and AS800089 TERMINAL BUILDING MODIFICATIONS".

**BASIS OF PAYMENT**

**800-5.1**

Payment will be made under:

<b>ITEM AR800178</b>	<b>FIBER OPTIC CABLE – PER LINEAR FOOT.</b>
<b>ITEM AS800178</b>	<b>FIBER OPTIC CABLE – PER LINEAR FOOT.</b>

## **ITEM 910 – ROADWAY SIGNAGE**

### **DESCRIPTION**

#### **910-1.1**

This item shall consist of furnishing Type 1 and Type 3 Sign panels complete with reflectorized sign faces, legend and supplemental panels and installing them on newly erected sign supports or light poles as detailed in the plans at the locations shown or as directed by the Resident Engineer.

This item shall also consist of the removal and disposal of existing roadway signs at the locations as shown in the plans or as directed by the Resident Engineer.

Work shall be in accordance with Section 720 and Section 729 of the Standard Specifications for Road and Bridge Construction and with IDOT Standards 720001-01, 720011-01 and 729001-01.

### **MATERIALS**

#### **910-2.1**

Materials shall meet the requirements of Sections 720 and 729 of the Standard Specifications for Road and Bridge Construction. Sign panels shall be as detailed in the plans.

### **CONSTRUCTION METHODS**

#### **910-3.1**

This work shall consist of the removal of existing airport owned roadway signs. Trenches or voids resulting from the removal shall be backfilled and compacted in accordance with P-152, Excavation and Embankment for areas in proposed turf or backfilled and compacted in accordance with Section 701-3.5 for areas under proposed pavements. Roadway signs shall be disposed of by the Contractor off Airport property unless otherwise directed by the Engineer.

Trench backfill of removal items shall be incidental to the removal item.

#### **910-3.2**

This work shall also consist of furnishing and installing metal posts of the size and type specified, utilizing the direct burial methods, or attaching sign panels to existing light standards as detailed in the plans.

#### **910-3.3**

Materials shall meet the requirements of Article 729 of the Standard Specifications for Road and Bridge Construction. Unless otherwise specified, only galvanized posts shall be used. The post shall be Type B as designated on Illinois Department of Transportation Highway Standard 720011-01 and 729001-01.

#### **910-3.4**

The metal posts may be driven by hand or mechanical means to a minimum depth of 8 feet (Type B) measured from the ground line or as shown in the plans. The post shall be protected by suitable driving cap and if required by the Engineer, the material around the post will be compacted after driving.

Care shall be taken to avoid scratching, chipping or other damage to polyester or enamel-coated posts during handling and installation. Chips and scratches may be recoated in the field by a method meeting the coating manufacturer's recommendations except that chips and scratches totaling more than 5% of the surface area of any one post and/or more than 5% of the surface area in any one-foot segment of any one post shall be cause for rejection of the post.

If the post specified is too long, the Contractor may choose to cut the post to the required length. Any post so cut shall be installed with the cut end at the bottom.

### **METHOD OF MEASUREMENT**

#### **910-4.1**

The quantity of roadway sign removals to be paid shall be the number, per each, of signs satisfactorily removed and disposed of off-site.

The quantity of roadway signs installed to be paid shall be the number, per each, of signs satisfactorily installed in accordance with applicable specifications and accepted by the Engineer. Sign posts and supports shall be incidental to this item. No additional compensation shall be made for additional length of posts required.

For purposes of measurement, sign panels will be defined by the surface area according to the following descriptions:

Type 1 – 9 square feet or less  
Type 3 – 24 square feet or more

Type 1 Signs shall be measured and paid for as ROADWAY SIGNAGE on a per each basis. Type 3 Signs shall be measured and paid for as TYPE 3 ROADWAY SIGN on a per each basis.

### **BASIS OF PAYMENT**

#### **910-5.1**

Payment shall be made at the contract unit price for REMOVE ROADWAY SIGN, per each. This price shall be full compensation for furnishing all materials, labor, equipment and necessary incidentals to complete the item as shown on the plans and as specified herein.

Payment shall be made at the contract unit price for ROADWAY SIGNAGE and TYPE 3 ROADWAY SIGN, per each. This price shall be full compensation for all materials and erection of all signs at proposed locations and for all materials, labor and equipment necessary to complete the work as described herein.

Payment will be made under:

<b>ITEM AR800111</b>	<b>TYPE 3 ROADWAY SIGN – PER EACH.</b>
<b>ITEM AR910200</b>	<b>ROADWAY SIGNAGE – PER EACH.</b>
<b>ITEM AR910915</b>	<b>REMOVE ROADWAY SIGN – PER EACH.</b>

**IDOT DIVISION OF AERONAUTICS POLICY MEMORANDA**

**State of Illinois  
Department of Transportation  
Bureau of Materials and Physical Research**

**POLICY MEMORANDUM**

January 1, 2007

Springfield

07-21

TO: REGIONAL ENGINEERS, HIGHWAY BUREAU CHIEFS, AND  
MANUFACTURERS AND SUPPLIERS OF FINELY DIVIDED MINERALS

SUBJECT: ACCEPTANCE PROCEDURE FOR FINELY DIVIDED MINERALS USED  
IN PORTLAND CEMENT CONCRETE AND OTHER APPLICATIONS

DEFINITIONS

**Department** - Illinois Department of Transportation.

**Bureau** - Bureau of Materials and Physical Research, at 126 East Ash Street, Springfield, Illinois 62704-4766.

**Finely Divided Mineral** - A finely divided material which has cementitious or pozzolanic properties. Examples are fly ash, microsilica (silica fume), ground granulated blast-furnace (GGBF) slag, and high-reactivity metakaolin (HRM).

**Manufacturer** - A company that manufactures a finely divided mineral. The term Producer is also used.

**Supplier** - A company that supplies a finely divided mineral which it does not manufacture.

**Source** - The name and location of the manufacturing process from which the finely divided mineral is obtained.

**Approved Source** - A source that is approved by the Bureau to ship a finely divided mineral for immediate use on Department projects.

**Unapproved Source** - A source that ships a finely divided mineral which must be sampled, tested, and approved by the Bureau before it is used on Department projects.

**Cement** - Portland cement.

**Fly Ash** - A finely divided residue that results from the combustion of ground or powdered coal, transported from the combustion chamber by exhaust gas, collected by mechanical or electrical means, and stored in stockpiles or bins.

**Microsilica** - An amorphous silica of high silica content and purity possessing high pozzolanic activity.

**Ground Granulated Blast-Furnace (GGBF) Slag** - A glassy granular material, formed when molten blast-furnace slag is rapidly chilled, and then finely ground.

**High-Reactivity Metakaolin (HRM)** - A reactive aluminosilicate pozzolan formed by calcining purified kaolinite at a specific temperature range.

**Reference Material** - A portland cement used for the control mortar and corresponding test mortars, of a finely divided mineral, to determine its strength activity index.

**Preliminary (PRE) Sample** - A sample used to determine, in advance, if the finely divided mineral will comply with Department specifications.

**Process Control (PRO) Sample** - A sample used for the purpose of controlling production of finely divided minerals proposed for incorporation into Department projects.

**Acceptance (ACC) Sample** - A sample used for accepting/rejecting finely divided minerals prior to its use on Department projects and/or unassigned stock for future use on projects. The quantity represented by acceptance samples must be given.

**Independent Assurance (IND) Sample** - A sample used to provide an independent check on the reliability of the manufacturer's quality control program.

**Investigation (INV) Sample** - A destination sample used to verify the acceptability of a finely divided mineral from a source.

**Grab Sample** - A sample secured from a conveyor, from bulk storage, or from a bulk shipment in one operation.

**Composite Sample** - Combined grab samples taken at prescribed intervals over a period of time.

**NIST** - National Institute of Standards and Technology.

**CCRL** - Cement and Concrete Reference Laboratory.

**ISO 9000 Series** - A program of international quality management system standards developed by the International Organization for Standardization (ISO).

## 1.0 PURPOSE

To establish procedures whereby materials of mineral origin, furnished by a **Manufacturer** or **Supplier**, will be accepted for use on **Department** projects.

## 2.0 SCOPE

This procedure is available to all **Manufacturers** or **Suppliers** of domestic and foreign **Finely Divided Minerals**. **Sources** in North America may be **Approved** or **Unapproved**. **Sources** located outside of North American will not be given **Approved Source** status, and the procedures in Sections 5.1 and 5.3 shall apply.

### 3.0 SPECIFICATION REQUIREMENTS, SAMPLING, AND TEST PROCEDURES

- 3.1 **Finely Divided Minerals** used on **Department** projects shall meet the material requirements of the **Department's** "Standard Specifications for Road and Bridge Construction (January 1, 2007)" and current special provisions.

### 4.0 APPROVED SOURCE PROCEDURE

- 4.1 A **Manufacturer** or **Supplier** requesting **Source** approval of a **Finely Divided Mineral** shall provide the following to the **Bureau**:

- (1) The **Manufacturer's** or **Supplier's** name and location.
- (2) The **Source** name, location (station), and number of generating units.
- (3) The name of the **Finely Divided Mineral** and its class or grade.
- (4) A certification that the **Finely Divided Mineral** meets the applicable requirements of Section 3.0.
- (5) A 6-month testing history.
- (6) A copy of the **Manufacturer's** or **Supplier's** quality control program.
- (7) A copy of the last **CCRL** inspection report of the testing laboratory used by the **Manufacturer** or **Supplier** of the **Finely Divided Mineral**, with documentation of resolution of any discrepancies noted therein. The **Manufacturer** or **Supplier** of **HRM** or **Microsilica** shall provide a copy of the testing laboratory's **CCRL** inspection report and/or an **ISO 9000 Series** certificate.
- (8) A copy of the Material Safety Data Sheet (MSDS) for the **Finely Divided Mineral**.

At the time of application, the **Manufacturer** or **Supplier** shall obtain a **Preliminary (PRE) Grab Sample** of the **Finely Divided Mineral** from current production. The **Manufacturer** or **Supplier** shall split the **PRE Sample** and place one portion in an airtight container and deliver it to the **Bureau**. A sample of the **Reference Material** used by the **Manufacturer** or **Supplier** for testing shall be included. The **Manufacturer** or **Supplier** shall assume the cost to deliver the samples to the **Bureau**. The size of the **Bureau's** portion of the **PRE Sample**, and the **Reference Material**, shall not be less than 3 kg (6 lb.) each and the samples shall be properly identified as required in Attachment 1. The **Manufacturer** or **Supplier** shall test the retained portion of the **PRE Sample** for the standard physical and chemical properties listed in the applicable specification in Section 3.0 and deliver a copy of the test results to the **Bureau** for comparison.

The **Bureau** will test its portion of the **PRE Grab Sample** for conformance to Section 3.0. The **Bureau** will compare the results obtained by both laboratories to determine compliance with the allowable difference between two laboratories set forth in the precision statement of each test method. Additional split sample testing will be required if the test results obtained on the **PRE Grab Sample** do not comply with the specification requirements of this policy memorandum.

An inspector from the **Bureau** may conduct a scheduled visit to inspect the laboratory facilities designated by the **Manufacturer** or **Supplier** to test the **Finely Divided Mineral**; the **Source** manufacturing process, the **Source** storage facilities; and the quality control policies, procedures, and practices used by the **Manufacturer** or **Supplier**. The **Manufacturer** or **Supplier** shall be responsible for payment of transportation, per diem (meals), lodging, and incidental travel costs incurred by the **Department**.

The **Bureau** will notify the **Manufacturer** or **Supplier**, in writing, if the request for **Approved Source** status is granted or denied. A request may be denied if the **Manufacturer** or **Supplier** fails to meet the requirements of this policy memorandum, or for other reasons determined by the **Department**.

#### 4.2 Quality Control Requirements for **Approved Sources**:

The **Manufacturer** or **Supplier** shall establish and maintain quality control policies and procedures for sampling and testing that are approved by the **Bureau**. The **Bureau** shall be notified of any changes in the **Manufacturer's** or **Supplier's** quality control program.

Testing laboratories used by the **Manufacturers** or **Suppliers** of **Fly Ash** or **GGBF Slag** shall participate in the **CCRL** pozzolan program of the **NIST**, which includes inspection of facilities and testing of comparative samples. As an alternative to the **CCRL** pozzolan program of the **NIST**, **Manufacturers** or **Suppliers** of **GGBF Slag** may participate in the **CCRL** cement program. Testing laboratories used by the **Manufacturers** or **Suppliers** of **Microsilica** or **HRM** shall participate in the **CCRL** pozzolan program of the **NIST** and/or shall have implemented a quality management system based on the **ISO 9000 Series** standards.

#### 4.3 Reporting Requirements for **Approved Sources**:

The **Manufacturer** or **Supplier** shall deliver a test report to the **Bureau** which lists the results of all **Grab** and/or **Composite Samples** taken and tested for the specified reporting period.

For **Fly Ash**, the report shall be monthly, and shall be delivered no later than forty calendar days after the end of the month. If the **Fly Ash Source** is sampling more frequently than once per month according to ASTM C 311, then the report shall be delivered no later than forty calendar days after the end of the composite date. If the deadline falls on a Saturday, Sunday, or State Holiday, the deadline shall be the next work day.

For **GGBF Slag**, **HRM**, and **Microsilica**, the report shall be quarterly and shall be delivered no later than forty calendar days after the end of each quarter. For the purpose of the reports, the quarters shall end March 30, June 30, September 30, and December 31. If the deadline falls on a Saturday, Sunday, or State Holiday, the deadline shall be the next work day.

Sampling, testing, and reporting shall be done according to the applicable specification in Section 3.0.

#### 4.4 Record Requirements for **Approved Sources**:



Records of production control tests shall be maintained by the **Manufacturer** or **Supplier** for a minimum period of 5 years, and shall be made available to the **Bureau** upon request.

Copies of bills of lading of quantities of **Finely Divided Minerals** shipped shall be maintained by the **Manufacturer** or **Supplier** for a minimum period of 3 years, and shall be made available to the **Bureau** upon request.

#### 4.5 Sampling and Test Requirements for **Approved Sources**:

For **Fly Ash**, each February, May, August, and November, the **Supplier** shall obtain a **Process Control (PRO) Grab Sample**.

For **GGBF Slag, HRM, and Microsilica**, each January, April, July, and October, the **Manufacturer** or **Supplier** shall obtain a **PRO Grab Sample**.

The **PRO Grab Sample** shall be split for testing by the **Manufacturer** or **Supplier** and the **Bureau**. At this time, a sample of the current **Reference Material** used by the **Manufacturer** or **Supplier** for testing shall also be split.

The **Bureau** may require that more frequent **PRO Grab Samples** be obtained and tested. Increasing the sampling frequency may be required due to significant changes in the material or process, variations in test results between the **Bureau** and **Manufacturer** or **Supplier**, field test results, or other reasons as determined by the **Bureau**. The **Bureau** samples shall be placed in airtight containers, properly identified on form BMPR CM01 ([www.dot.il.gov/materials/materialforms.html](http://www.dot.il.gov/materials/materialforms.html)), and delivered to the **Bureau** no later than the last work day of the month. Each **Finely Divided Mineral** sample and **Reference Material** sample shall not be less than 3 kg (6 lb).

The **Manufacturer** or **Supplier** shall test the retained portion of each **PRO Sample**, using the retained portion of the **Reference Material**, for the standard physical and chemical properties listed in the applicable specification in Section 3.0. When all tests are completed, the **Manufacturer** or **Supplier** shall record the test results on a report form that identifies the sample as a **PRO Sample**, and deliver the report to the **Bureau** no later than the last work day of the following month from the date of sample.

The test results obtained by the **Manufacturer** or **Supplier** and the **Bureau** on all split samples will be compared for compliance with the allowable differences for two laboratories set forth in the precision statement of each test method and for compliance with Section 3.0. If significant differences exist in the split sample test results, the **Department** will investigate sampling and test procedures, or require additional comparative sampling to determine the cause of the variation.

#### 4.6 **Department** Inspections of **Approved Sources**:

An inspector from the **Bureau** may conduct unscheduled visits, at **Department** expense, to each **Approved Source** or one of its terminals. During this visit, the inspector will either take or witness the taking of a random **Independent Assurance (IND) Grab Sample**. The inspector will split the sample and deliver an equal portion to the **Manufacturer** or **Supplier**. The **Manufacturer** or **Supplier** shall test the retained portion of the split sample for the standard physical and chemical properties

listed in the applicable specification and deliver the test results to the **Bureau**, as specified in Section 4.5, for comparison and compliance with Section 3.0.

Random **Investigation (INV) Samples** of the **Finely Divided Minerals** and the project **Cement** will be obtained at final destination by a representative of the **Department**. The representative will either take or witness the taking of the **INV**

**Samples**. **INV Samples** will be **Grab Samples** and shall not be less than 3 kg (6 lb). (Note: **Cement** samples will be taken according to ASTM C 183). The

sampling location and frequency for obtaining **INV Samples** will be determined by the **Bureau** in consultation with the district offices.

The **Bureau** will test **INV Samples** to ascertain the results of **Finely Divided Mineral-project Cement** combinations. To verify that **Finely Divided Minerals** shipped from **Approved Sources** meet the requirements of Section 3.0, the **Bureau** will test **INV Samples** with the appropriate **Reference Material**.

#### 4.7 Revocation of **Approved Source** Status:

Failure of a **Manufacturer** or **Supplier** to meet the requirements of Sections 3.0 and 4.0 of this policy memorandum will be sufficient cause to revoke **Approved Source** status. However, a total of three late submittals in a twelve month period for any of the following: test report (**Grab** or **Composite Samples**), **PRO Sample**, or **PRO** test results will be permitted. Revocation will occur if a fourth late submittal occurs in a twelve month period. The **Manufacturer** will be notified in writing when the third late submittal in a twelve month period occurs.

Failure to resolve significant differences in testing, as indicated by the test results obtained on **PRO** or **IND Samples** split with the **Manufacturer** or **Supplier** will be sufficient cause to revoke **Approved Source** status.

Failure of the testing laboratory, used by the **Manufacturer** or **Supplier** of a **Finely Divided Mineral**, to satisfactorily resolve the discrepancies noted in the **CCRL** inspection report and/or to maintain a quality management system based on the **ISO 9000 Series** will be sufficient cause to revoke **Approved Source** status.

Revocation of **Approved Source** status will be reported to the **Manufacturer** or **Supplier** in writing. The **Manufacturer** or **Supplier** may not re-apply for **Approved Source** status until 30 days have elapsed from the date of the written notice of revocation.

## 5.0 UNAPPROVED SOURCE PROCEDURE

5.1 A **Manufacturer** or **Supplier** requesting approval of a **Finely Divided Mineral** from an **Unapproved Source** shall provide the following to the **Bureau**:

- (1) The **Manufacturer's** or **Supplier's** name and location.
- (2) The **Source** name, location (station), and number of generating units.
- (3) The name of the **Finely Divided Mineral** and its class or grade.

- (4) A current test report, in English, which indicates the standard physical and chemical composition of the **Finely Divided Mineral** as per Section 3.0.
- (5) The transportation method and location at which an inspector from the **Bureau** will be able to obtain **Acceptance (ACC) Samples**.
- (6) If requested by the **Bureau**, the **Manufacturer** or **Supplier** shall deliver to the **Bureau** a 24-hr **Composite Preliminary (PRE) Sample** of the **Finely Divided Mineral** from current shipments. The **Manufacturer** or **Supplier** shall assume the cost to deliver it to the **Bureau**. The size of the **PRE Sample** shall not be less than 3 kg (6 lb) and the sample shall be properly identified as required in Attachment 1.

5.2 Sampling and Test Requirements for **Unapproved Sources** in North America:

- (1) **Finely Divided Minerals** from an **Unapproved Source** will be sampled, tested, and approved by the **Bureau** before use on **Department** projects. The **Bureau** has the option to affix a seal to secure **Finely Divided Minerals** in storage (e.g. silo, truck, railroad car, or barge) until the **Bureau's** testing is completed.
- (2) Upon arrival of the **Finely Divided Mineral** to Illinois, an inspector from the **Bureau** will obtain **Acceptance (ACC) Grab Samples** according to the applicable specifications. The **Bureau** will determine the number of representative samples required.
- (3) The **Manufacturer** or **Supplier** may request the **Bureau** to sample the **Finely Divided Mineral** prior to arrival in Illinois. In the event the request is approved, the **Manufacturer** or **Supplier** shall be responsible for payment of transportation, per diem (meals), lodging, and incidental travel costs incurred by the **Department** inspector. If the **Department** determines that it lacks the resources to accomplish out-of-state inspection, the **Finely Divided Mineral** may be sampled and tested according to the procedures in Section 5.3.
- (4) **Acceptance (ACC) Samples** will be tested by the **Bureau** for conformance to Section 3.0, and to approve the **Finely Divided Mineral** for use on **Department** projects.
- (5) **Random Investigation (INV) Samples** of **Finely Divided Minerals** may be obtained at final destination by a representative of the **Department**. The representative will either take or witness the taking of the **INV Samples**. **INV Samples** will be **Grab Samples** and will be taken according to the applicable specification. The sampling location and frequency for obtaining **INV Samples** will be determined by the **Bureau** in consultation with the district offices. The **Bureau** will use **INV Samples** to verify that the **Finely Divided Mineral** shipped meets the requirements of Section 3.0.

5.3 Sampling and Test Requirements for **Unapproved Sources** Located Outside North America:

An agent of the importer shall obtain an **Independent Assurance (IND) Grab Sample** from each barge of foreign **Finely Divided Mineral** loaded at the port of entry and destined for Illinois.

The agent shall split each barge **Grab Sample** and mail one portion to the **Bureau**. The other portion shall be mailed to the importer's testing laboratory that is approved by the **Department**. The importer of the **Finely Divided Mineral** shall be responsible for all sampling and mailing costs.

The importer's laboratory shall test its portion of each barge **Grab Sample** for the standard physical requirements of the applicable specifications. One random barge **Grab Sample**, representing the **Finely Divided Mineral** in each hold of the vessel shall be tested for chemical composition.

Upon completion of the tests, the importer shall deliver to the **Bureau** a certification that states the **Finely Divided Mineral** in the vessel unloaded at the port of entry has been tested by the importer, and complies with the applicable specifications. Attached to the certification shall be a test report of all barge samples. The report shall include the name of the vessel, the source of the **Finely Divided Mineral**, the barge number, the hold number, the date the sample was taken, the quantity of **Finely Divided Mineral** in the barge, and the physical and chemical test results obtained on the samples.

The importer shall immediately notify the **Bureau** if a barge sample fails to meet the applicable specification requirements.

The **Bureau** will review the certification and compare the importer's test data to the test data obtained by the **Bureau** on its portion of each split sample.

When the certification and the accompanying test report are examined and determined to be correct, the **Bureau** will notify the importer and the district offices that the **Finely Divided Mineral** is approved for state projects.

**Random Investigation (INV) Samples**, from one or more barges, may be taken by a **Department** inspector when the barges arrive at the Illinois terminal(s).

The **Department** will reject any foreign **Finely Divided Mineral** tested by the **Bureau**, or the importer, that does not meet the specification requirements. The **Department** may reject any barge of **Finely Divided Mineral** wherein the differences in test values, obtained by the **Department** and the importer on the split sample, exceeds the multilaboratory precision of the test method, but the **Finely Divided Mineral** is within specifications.

Alternative proposals to the sampling and test requirements stated in this section will be considered for **Finely Divided Minerals** which have an acceptable quality history, and which have previously been approved by the **Department**. Requests shall be directed to the **Bureau of Materials and Physical Research** for approval.

## 6.0 ACCEPTANCE OF FINELY DIVIDED MINERALS

- 6.1 **Finely Divided Minerals** will be accepted according to the **Department's** current "Standard Specifications for Road and Bridge Construction," current special provisions, and this policy memorandum.
- 6.2 The **Bureau** will maintain and circulate a current list of **Approved Sources** of **Finely Divided Minerals** which meet the requirements of this policy memorandum. This list will include the name, location, and Producer/Supplier Number of each approved **Manufacturer** or **Supplier** of **Finely Divided Minerals**. These **Manufacturers** or **Suppliers** may ship **Finely Divided Minerals** for immediate use on **Department** projects.
- 6.3 **Finely Divided Minerals** from **Unapproved Sources** will be approved by the **Bureau** before use on **Department** projects.

## 7.0 REJECTION OF FINELY DIVIDED MINERALS

- 7.1 A **Finely Divided Mineral** that fails to conform to the requirements of Section 3.0 of this policy memorandum shall be rejected for use on **Department** projects.
- 7.2 The **Bureau** will notify the **Manufacturer** or **Supplier** when a **Finely Divided Mineral** is rejected for use on **Department** projects.



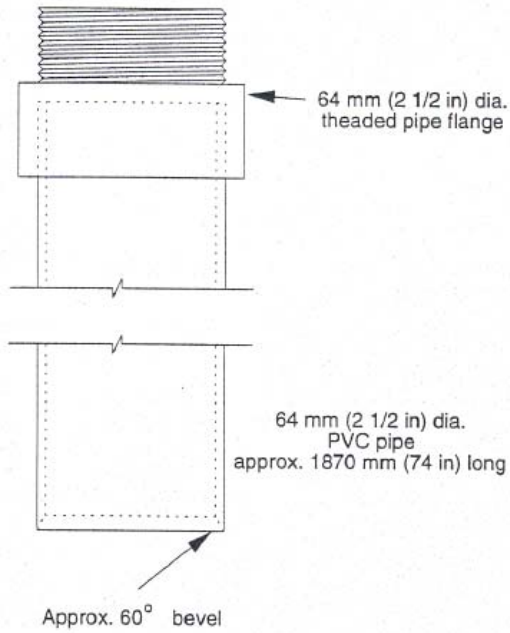
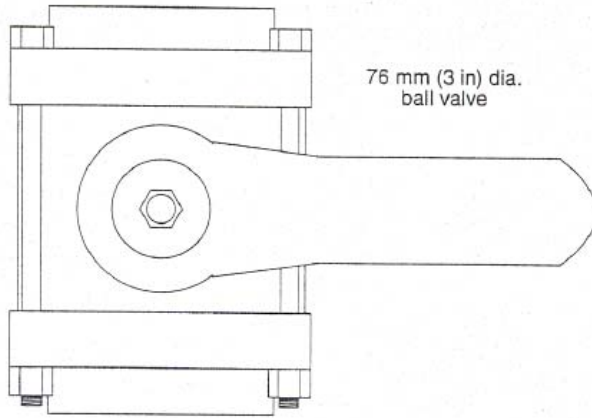
David L. Lippert, P.E.  
Acting Engineer of Materials  
and Physical Research

Attachment

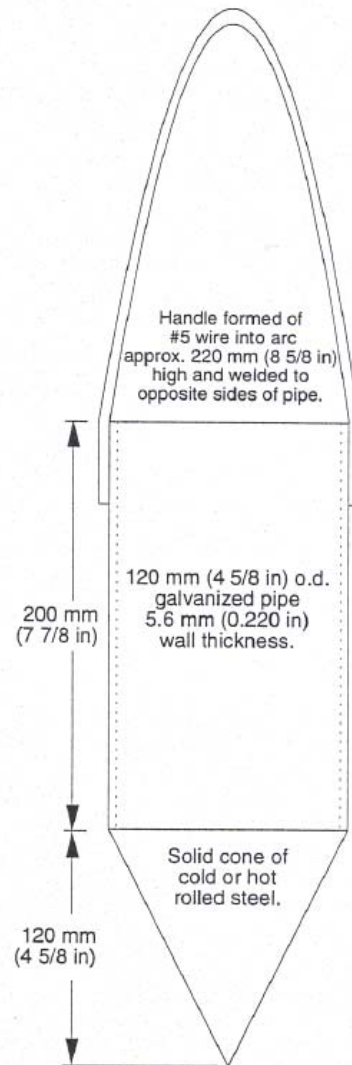
This policy memorandum supersedes Policy Memorandum 06-03 dated January 1, 2006.
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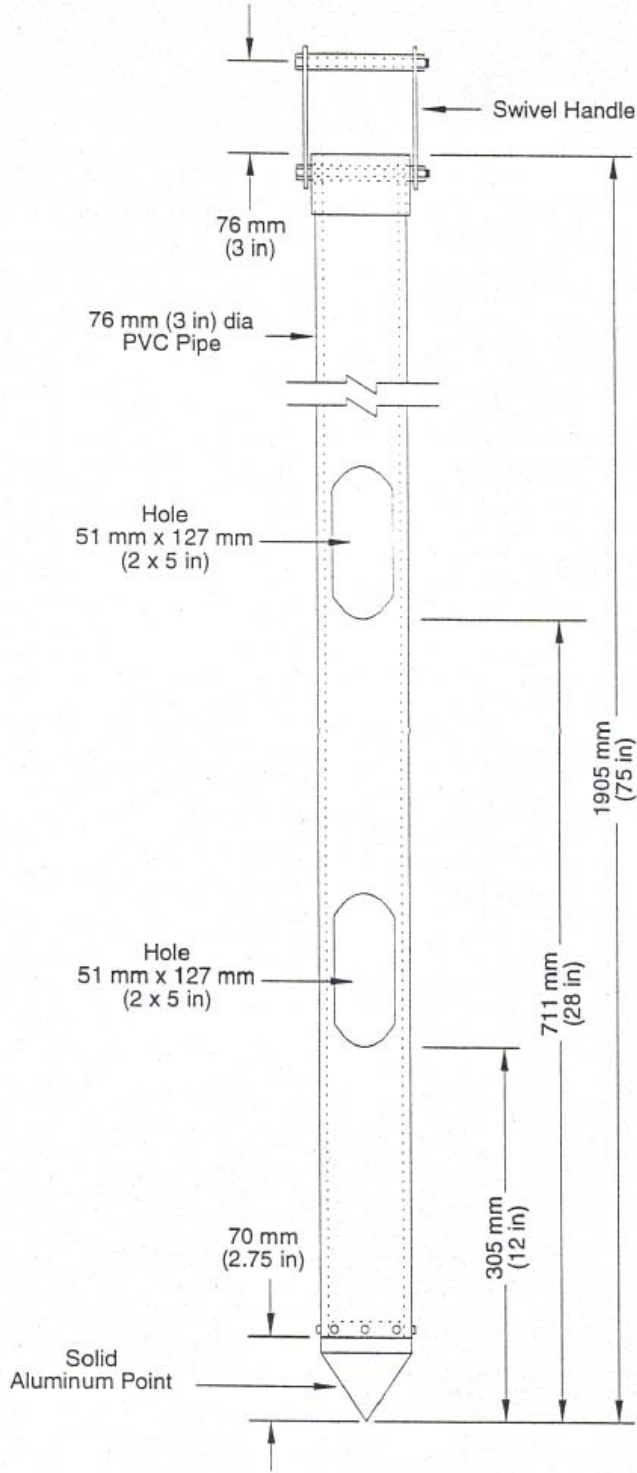
### Vacuum Type Bulk Cement Sampler



### Drop Type Bulk Cement Sampler



Note:  
Total mass weight of sampler not less than 6 kg (13 lb)



### Tube Type Bulk Cement Sampler

State of Illinois  
Department of Transportation  
Division of Aeronautics

POLICY MEMORANDUM

April 1, 2010

Springfield

Number: 87-2

TO: CONSULTING ENGINEERS

SUBJECT: DENSITY ACCEPTANCE OF BITUMINOUS PAVEMENTS

1. Introduction

This Policy Memorandum deals with the implementation of the bituminous density quality assurance specifications as outlined in the Standard Specifications for Construction of Airports, Sections 401-4.15 and 403-4.15.

II. Sampling

After completion of compaction and when the pavement has reached ambient temperature, the paved area shall be divided into Sublots of 500 tons per type of mix. One core sample (2 cores per sample) shall be taken from each Sublot. The longitudinal and transverse location for each sample shall be determined by use of a random number "Deck" provided by the Division. No core shall be taken closer than two (2) feet from the edge of the mat. A core extraction device shall be used to obtain all cores from the mat. All cores are to be taken by the contractor under the supervision and remain in the possession of the Engineer. It is imperative that the Engineer and the contractor realize that the cores are "money" and that improper coring, extraction, shipping and/or testing can be costly.

One mix sample per 1000 tons of mix laid shall be taken for Extraction, Maximum Specific Gravity ( $G_{mm}$ ) and Air Void tests. The mix samples shall be sampled by the contractor and split in half.

The Resident Engineer shall randomly designate and send the split samples to an independent laboratory for testing. The laboratory will be verified to be ASTM-certified for all the required testing and be contracted through the Consultant. The frequency of testing split samples shall be 1 per 5000 tons. Higher frequencies may be necessary if the contractor's tests, and/or mix quality control are inconsistent.



### III. Testing

All cores shall be tested for Bulk Specific Gravity ( $G_{sb}$ ) in accordance with ASTM D2726 using Procedure 9.1, "For Specimens That Contain Moisture". The Theoretical Maximum Gravity ( $G_{mm}$ ) shall be determined according to ASTM D2041, Procedure 7. From these tests the in-place air voids of the compacted pavement are calculated according to ASTM D3203 for "dense bituminous paving mixtures". Selection of the proper  $G_{mm}$  shall be based on a running average of four (4) tests per Lot.

- Eg. Lot 1 - Use the average of the two (2) tests for Lot 1.  
Lot 2 - Use the average of the four (4) tests from Lots 1 and 2.  
Lot 3 - Use the average of the four (4) tests from Lots 2 and 3.

NOTE: When more than four (4) Sublots are used, still use a running average of four (4) tests per Lot.

### IV. Acceptance Calculations

The first step in calculating the quantities for pay is to calculate the Mean ( $\bar{x}$ ) and the Standard Deviation (S) of the Sublot tests. From this data the Lot samples should first be tested for outliers. After consideration for outliers, the Percent Within Tolerance (PWT) and the Percent Within Limits (PWL) are calculated to determine the final pay quantities for the Lot.

#### EXAMPLE

##### 1. Test Data

Lot Quantity = 2000 tons  
Sublot Test 1 = 4.35 % Air Voids  
Sublot Test 2 = 3.96 % Air Voids  
Sublot Test 3 = 6.75 % Air Voids  
Sublot Test 4 = 6.25 % Air Voids

##### 2. Calculating the Mean and Standard Deviation

Sublot	$\underline{x}$	$(\underline{x} - \bar{x})$	$(\underline{x} - \bar{x})^2$
1	4.35	- 0.978	0.956
2	3.96	- 1.368	1.871
3	6.75	1.422	2.022
4	<u>6.25</u>	0.922	<u>0.850</u>
Sum =	21.31		5.699

$$N = 4$$

$$\text{Mean}(\bar{x}) = 21.34 / 4 = 5.328$$

$$\text{Variance } (S)^2 = \frac{\text{Sum}(x - \bar{x})^2}{3} = \frac{5.699}{3} = 1.900$$

$$\text{Standard Deviation } S = \sqrt{1.900} = 1.378$$

### 3. Test For Outliers

Check for Critical "T" Values

$$T = \frac{|(x_1 - \bar{x})|}{S} = \frac{|3.96 - 5.328|}{1.378} = 0.99$$

\* Difference between the suspect test value ( $x_1$ ) and the Mean ( $\bar{x}$ ).

If the T value exceeds the critical "T" Value in the table below and no assignable cause can be determined for the outlier, discard the suspected test measurement and obtain another random sample from the Sublot in question. If the new test exceeds the Mean ( $\bar{x}$ ) in the same direction from the Mean as the suspected test, recalculate the T value including all tests (original test, suspected test, and new test) for an outlier and for computing final payment.

#### TABLE OF CRITICAL "T" VALUES

Number of observations (N)	Critical "T" Value 5% Significance Level
3	1.15
4	1.46
5	1.67
6	1.82
7	1.94
8	2.03
9	2.11
10	2.18
11	2.23
12	2.29

Based on the above table, the "T" value of 0.99 does not exceed the Critical "T" Value of 1.46 for N = 4. Therefore, the value (3.96) is not an outlier and shall be used in calculating the Lot payment.

### 4. Calculation of Lot Payment

To calculate the Lot Payment use the Acceptance Criteria as outlined under Item 401-4.15(c) or Item 403-4.15(c).

$$Q_L = \frac{(\bar{x} - 1)}{S} = \frac{5.328 - 1}{1.378} = 3.141$$

$$Q_u = \frac{(7 - \bar{x})}{S} = \frac{7 - 5.328}{1.378} = 1.213$$

From this data the Percentage Within Tolerance (PWT) for both the lower and upper tolerance limits is determined by Table 6 (see Item 401 Bituminous Surface Course and/or Item 403 Bituminous Base Course in the Standard Specifications) for the number (N) of samples tested.

$$\begin{aligned} \text{Eq. PWT (lower)} &= 99.0\% \\ \text{PWT (upper)} &= 90.4\% \end{aligned}$$

We now calculate the Percent Within Limits (PWL) for the Lot.

$$\begin{aligned} \text{PWL} &= [\text{PWT (lower)}] + [\text{PWT (upper)}] - 100 \\ \text{PWL} &= (99.0 + 90.4) - 100 = 89.4\% \end{aligned}$$

Using Table 5, the % Adjustment in Lot Quantity is:

$$\begin{aligned} \% \text{ Adjustment} &= 0.5 \text{ PWL} + 55.0 \\ \% \text{ Adjustment} &= 0.5 (89.4) + 55.0 \\ \% \text{ Adjustment} &= 99.7 \end{aligned}$$

$$\begin{aligned} \text{Adjusted Quantities} &= \% \text{ Adjustment} \times \text{Lot Quantities} \\ \text{Adjusted Quantities} &= 0.997 \times 2000 \text{ tons} \\ \text{Adjusted Quantities} &= 1994 \text{ tons} \end{aligned}$$

#### 5. Resampling and Retesting

The contractor has the right to request the resampling and retesting of a complete Lot. This privilege is only allowed once for each Lot and must be requested in writing by the contractor within 48 hours of receiving the official report from the Engineer.

#### 6. Reporting

After completion of the tests for each Lot, the Engineer shall complete the necessary calculations for final adjustment in quantities on the Form AER-1 and have both the Engineer and the Contractor sign the report for copying to both the FAA and IDOA.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 87-2, dated January 1, 2004.

State of Illinois  
Department of Transportation  
Division of Aeronautics

**POLICY MEMORANDUM**

April 1, 2010

Springfield

Number: **87-3**

TO: CONSULTING ENGINEERS

SUBJECT: MIX DESIGN, TEST BATCH, QUALITY CONTROL, AND ACCEPTANCE TESTING OF PCC PAVEMENT MIXTURE

I. SCOPE

This Policy Memorandum addresses the Mix Design, Test Batch, Quality Control and Acceptance Testing of PCC pavement mixtures specified by Item 501, Portland Cement Concrete Pavement, in accordance with the Standard Specifications for Construction of Airports, Special Provisions, and policies of the Division of Aeronautics.

II. MIX DESIGN

Prior to the start of paving operations and after approval by the Division of Aeronautics (IDOA) of all materials to be used in the manufacture of the concrete, the contractor shall provide a preliminary mix design(s) for evaluation at the Test Batch. The mix design shall indicate saturated surface dry batch weights per cubic yard for each material component. In addition, each material component, including chemical admixtures, shall be identified by the IDOT material code number, the IDOT producer code number, and the producer name and location. Saturated surface dry and oven dry specific gravities, as well as absorption values, for each proposed aggregate to be used in the mix shall be indicated on the mix design. When requested in writing by the contractor, the Engineer will recommend a preliminary mix design for evaluation at the Test Batch.

The Mix Design and the contractor's approved Job Mix Formula (JMF) will be issued by our office subject to verification of the mix by strength tests obtained from mix prepared from a Test Batch(es) according to the approved JMF. The water-cementitious ratio established from the approved test batch is the maximum water-cementitious ratio allowed during production paving. Whether the contractor selects his own mix design or chooses to use the mix design recommended by the Division, the contractor is responsible for the mix design, as well as the manufacture and placement of the mix.

III. TEST BATCH

At least 28 days prior to the start of production, the contractor and/or producer shall prepare a Test Batch under the direction of the Engineer. The Test Batch shall be prepared at the concrete plant proposed for use in the production of the concrete mix for

the project and shall be in accordance with the approved Job Mix Formula (JMF). When approved by the Engineer, the Test Batch may be prepared at a different plant provided that the same materials specified in the JMF are used. The plant shall have been surveyed and approved by the Engineer prior to preparation of the Test Batch. As required by these Special Provisions, the contractor shall provide Quality Control for production of the concrete. The contractor shall have his Quality Control Manager and a representative of the contractor familiar with the paving operation, present at the Test Batch preparation. The Test Batch shall be prepared as follows:

A. Proportioning

Prior to preparation of the mix, the Proportioning Technician shall perform a minimum of two (2) gradation analysis and two (2) moisture tests on each aggregate used. The gradation analysis shall be reported on form AER-12. From this data, the JMF shall be adjusted for moisture, in accordance with form AER-12. A microwave type moisture probe (or equal) may be allowed to adjust proportions for sand moisture when approved by the Engineer.

B. Preparation of the Mix:

- 1.) Prepare a Test Batch that is at least one-half (1/2) the manufacturer's rated capacity of the mixing drum (in cubic yards). The Test Batch shall be prepared with the approved JMF, adjusted for moisture.
- 2.) Mixing requirements shall be:
  - a.) Central Mix Plant: Mixing time shall be a minimum of 90 seconds. If transit mixer trucks are used to transport the mix, the mix shall be agitated, after mixing, at 2-5 RPM for the approximate time anticipated between batching at the plant and deposit of the concrete in the forms. If non-mixing trucks are used to transport the mix, the mix shall remain in the central mixer with no mixing or agitation for the approximate time anticipated from when the water contacts the cement and deposit of the concrete in the forms.
  - b.) Transit Mix Plant: Mixing shall consist of 70-100 Revolutions @ 5-16 RPM. After initial mixing, agitate mix at 2-5 RPM for the approximate time anticipated between batching at the plant and deposit of the concrete in the forms.
- 3.) Slump and Air: If the air content after aging is  $6.0\% \pm 1.5\%$  and provides the required workability for paving, the contractor will make cylinders for testing at 3, 7, 14 and 28 days. If the slump is below that required for placement, the contractor may add additional water to increase the slump as necessary up to the maximum water/cement ratio (or water/cementitious material) ratio listed herein. Additional mixing of at least 40 Revolutions will be required with each addition of water. Cylinders and/or beams will be made for testing at 3, 7, 14 and 28 days when the slump is obtained, at  $6.0\% \pm 1.5\%$  air content. The water/cement ratio (or water/cementitious material) ratio cannot exceed 0.44 based on actual batch weights when 501-3.6(A) proportions is specified, and 0.42 when 501-3.6(B) proportions is specified.

- 4.) The Proportioning Technician shall complete Form AER M-7, Plastic Concrete Air, Slump and Quantity and Form AER M-6, Concrete Moisture Determination (Adjusted Oven Dry Method), to be given to the Resident Engineer after completion of the Test Batch. The Flask Method, Dunagan Method, and Pycnometer Jar Method are also acceptable test methods for the determination of aggregate moisture.
- 5.) The Resident Engineer and contractor shall each independently complete Form AER M-4, Concrete Plant Production, Mix Verification.
- 6.) The concrete test cylinders and/or beams shall be tested at 3, 7, 14 and 28 days to establish a growth curve of concrete strength vs. age. The compressive strength shall be at least 800 psi, over the specified strength, at 28 days. Flexural strength concrete shall have at least 100 psi over the specified strength at 28 days.

#### IV. QUALITY CONTROL

Quality control testing is the responsibility of the contractor and must be performed by qualified testing personnel approved by the Engineer. The proportioning technician shall be PCC Level II certified by the testing firm must perform his or her duties on a full time basis whenever concrete is produced for an IDOA project.

The proportioning technician shall perform the duties as outlined in the Division of Highways latest Manual of Instructions for Concrete Proportioning and Testing and as outlined as follows. These duties as outlined are not necessarily all inclusive and may include other duties as required by the specifications, special provisions, etc.

If a QC or QA test for slump, air content, or mix temperature fails to meet the requirements of the specifications the contractor shall reject the batch. In the case of a failing test of the air content, the contractor may make adjustments to the concrete to bring the air content into compliance with the specification. Adjustments are subject to the time limitations of 1 hour from time of batching when the concrete is transported in mixer trucks. Time limitations shall be increased by 30 minutes when the concrete mixture contains a retarding admixture. When concrete has been rejected due to failing test results, the contractor shall continue to run tests for the failed test parameter until at least 3 consecutive passing tests are achieved. This testing is in addition to the normal QC and QA testing.

##### A. Duties of the Proportioning Technician:

- 1.) Check and maintain shipment tickets of each material used in the manufacture of the concrete. These tickets are to be given to the Resident Engineer for each day's production of concrete. The aggregates shall indicate the quality on the ticket and a statement that the coarse aggregate is a non "D" cracking (freeze-thaw rated by IDOT) aggregate. In lieu of having these statements on each ticket, the contractor may use the Division's Aggregate Certification of Compliance form, or supply the Resident Engineer with a certification letter indicating the stone quality and statement of non "D" cracking compliance.

- 2.) Inspect and maintain proper storage of all aggregates and materials daily.
- 3.) Perform at least one (1) sieve analysis for each aggregate daily.
- 4.) Inspect all weighing or measuring devices daily.
- 5.) Twice daily check the actual weighing or measuring of aggregates, cement, water, and admixtures for conformance to adjusted batch proportions. Record data on Form AER-4, Concrete Plant Production, Mix Verification, and calculate the water/cement (or water/cementitious material) ratio.
- 6.) See that the volume of the batch does not exceed the allowable capacity of the mixer and that the proper mixing time is used.
- 7.) Make at least two (2) moisture tests of each aggregate daily and correct batch weights as required.
- 8.) Adjust the dosage rates of the admixtures as required to meet concrete temperature changes and paving conditions.
- 9.) Complete AER M-7, Concrete Air, Slump and Quantity, and Form AER-4, Concrete Plant Production, Mix Verification for each day's production and deliver same to the Resident Engineer at the end of the day for which the data pertains. Provide to the Resident Engineer load tickets for all aggregates, cement, and admixtures used in the mix.

The Resident Engineer will also be required to visit the plant twice daily on a random basis to record actual batch weights and complete Form AER-4, Concrete Plant Production, Mix Verification. Forms AER-4, AER -7, and AER -12 shall be submitted to the R.E. on a daily basis and then faxed by the R.E. to the Division of Aeronautics daily. (FAX is (217) 558-1328)

#### V. ACCEPTANCE TESTING

As required by Item 501-5.3 of the Standard Specifications, acceptance and payment of the final pavement is based on the strength of either cylinders or beams taken at random during the time of construction. The pavement shall be divided into Lots of 1200 cubic yards with sublots of 300 cubic yards each. The final subplot of the project shall be separated into an additional subplot if the concrete quantity is greater than or equal to 150.0 cubic yards. Otherwise, this remaining quantity shall be incorporated into the previous subplot.

One random sample (two cylinders or one beam) shall be obtained from each subplot for testing at 28 days to calculate final payment. At the time a subplot sample is taken, one (1) slump and one (1) air test shall be taken.

In addition to the above described sample frequency, three (3), seven (7) and fourteen (14) day tests shall be taken. The Engineer may require additional tests to maintain Quality Control.

Lots and sublots shall not be separated by mix design or day of paving if the project is using more than one mix design. The grouping of Lots and sublots is to be done solely by the quantity of cubic yards poured on the project.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 87-3, dated July 31, 2004.



State of Illinois  
Department of Transportation  
Division of Aeronautics

**POLICY MEMORANDUM**

January 1, 2004

Springfield

Number: **87-4**

TO: CONSULTING ENGINEERS

SUBJECT: DETERMINATION OF BULK SPECIFIC GRAVITY (d)  
OF COMPACTED BITUMINOUS MIXES

- A. SCOPE. This method of test covers the determination of the bulk specific gravity and the percent air, of core samples from compacted bituminous mixtures using a saturated surface-dry procedure.
- B. DEFINITIONS.
1. Bulk Specific Gravity ( $G_{sb}$ ) or density is the weight per unit volume (gms/cc) of a mixture in its existing state of consolidation. The volume measurement for this specific gravity will include the volume of all the aggregate, asphalt, and air spaces (voids) in the aggregate particles and between the aggregate particles.
  2. Theoretical Maximum Specific Gravity ( $G_{mm}$ ) ASTM 2041 is the weight per unit volume (grams/cc) of a mixture assuming complete consolidation; i.e., all the air spaces (voids) between the aggregate particles are eliminated.
  3. Percent Density is a measure of the degree of compaction in relation to the Theoretical Maximum Specific Gravity.
  4. Percent Air is a measure of the air voids in the compacted pavement.
- C. APPARATUS.
1. Balance - The balance shall be accurate to 0.1 gm throughout the operating range. It may be mechanical or electrical and shall be equipped with a suitable suspension apparatus and holder to permit weighing of the core in water while suspended from the balance. If the balance is a beam type, it shall be set up so that the core is placed in the basket that is suspended from the zero (0) end of the balance arm.
  2. Water bath - The container for immersing the core in water while suspended from the balance shall be equipped with an overflow outlet for maintaining a constant water level. This water bath should be large enough to handle full-depth cores. When testing several cores at the same time, a dish-pan, sink or suitable container may be used for soaking.

#### D. PROCEDURE.

1. Prior to testing, cores shall be sorted on a flat surface in a cool place. The sample(s) shall be brushed with a wire brush and/or other suitable means, to remove all loose and/or foreign materials, such as seal coat, tack coat, foundation material, soil, paper, and foil, prior to testing.
2. If a core contains binder and surface or multiple lifts, the lifts shall be separated. This may be done in the following manner:
  - a. Mark the separation line between the two lifts.
  - b. Place the core in a freezer for 20-25 minutes.
  - c. Place a 2 or 3-inch wide chisel on the separation line and tap with a hammer. Rotate the core and continue this process until the core separates. Brush loose pieces with a wire brush if needed.
  - d. Allow 2-3 hours for the core to return to ambient temperature before proceeding.
3. Prepare the water baths for soaking and weighing with water at 77<sup>o</sup> F. Water baths should be maintained at this temperature throughout testing. Saturate the cores by submerging in the water for a minimum of 20 minutes.
4. With the balance and water bath properly assembled and zeroed, suspend the sample from the balance and submerge it in the water bath. The core must be placed with the original top and bottom in a vertical position. If necessary, add sufficient water to bring the water level up to the overflow outlet. Permit any excess to overflow. Read and record the Saturated Submerged Weight. Designate this weight as (C).
5. Remove the core from the water bath and blot the excess water from the surface of the core with an absorbent cloth or other suitable material. This must be done quickly to prevent the internal water from escaping.
6. Place the core on the balance and read and record the Saturated Surface-dry Weight in air. Designate this weight as (B).
7. Place the core in a tared pan and dry in an oven. When the core is dry, (less than 0.5 gm loss in one hour) record the weight and subtract the pan weight. Designate this weight as (A).

8. The following calculation is used to determine the Bulk Specific Gravity of the core.

$$G_{sb} = \frac{A}{B-C}$$

$G_{sb}$  = Bulk Specific Gravity  
A = Oven dry weight  
B = Saturated surface-dry weight  
C = Saturated submerged weight

- E. PERCENT DENSITY. The following calculation is used to determine the percent density of the core:

$$\% \text{ Density} = 100 \times \frac{G_{sb}}{G_{mm}}$$

$G_{sb}$  = Bulk Specific Gravity  
 $G_{mm}$  = Theoretical Maximum Gravity\*

Note: The Theoretical Maximum Gravity ( $G_{mm}$ ) is determined from the mix design until current Vacuum Pycnometer test are available.

- F. PERCENT AIR. To calculate the percent air, use the following formula:

$$\% \text{ Air} = 100 - \% \text{ Density}$$

- G. WEIGHT PER SQUARE YARD OF COMPACTED MIXTURE. The actual weight per square yard of a compacted mixture can be calculated by using the Bulk Specific Gravity ( $G_{sb}$ ). The volume of a square yard of pavement one (1) inch thick is 0.75 cubic foot. Taking the weight of a cubic foot of water as 62.37 pounds, one square yard of compacted material, one (1) inch thick weighs:

$$\text{Pounds Per Sq. Yd. (1" thick)} = 0.75 \times 62.37 \times G_{sb}$$

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 87-4 effective January 1, 1994.

State of Illinois  
Department of Transportation  
Division of Aeronautics

**POLICY MEMORANDUM**

January 1, 2004

Springfield

Number: **90-1**

TO: CONSULTING ENGINEERS

SUBJECT: Resampling and Retesting of PCC Pavement

I. PURPOSE

1. This Policy Memorandum outlines the procedure for resampling and retesting of individual Lots of PCC Pavement for the determination of final Price Adjustment as permitted by the Special Provisions for Item 501 Portland Cement Concrete Pavement (Plain and Reinforced).

II. RESAMPLING AND RETESTING.

1. If the contractor should request the resampling and retesting of a LOT, he must notify the Engineer in writing within 24 hours of receiving the written test results and payment results for the LOT in question. The entire LOT must be resampled (no selective resampling of individual sublots will be allowed) and the contractor is not allowed to take additional cores. Once approval to resample has been granted, the Engineer will select random locations from each SUBLLOT of the LOT in question and direct the contractor to drill two (2) 4 inch or 6 inch diameter cores from each location. The cores shall be obtained, cured and tested in accordance with ASTM C 42, Obtaining and Testing Drilled Cores and Sawed Beams of Concrete. The Engineer will take possession of the cores once they have been cut by the contractor.

III. CALCULATION FOR PRICE ADJUSTMENT

1. When Compressive Test Specification (501-3.6(A) Proportions) is specified. The two (2) specimens from each SUBLLOT shall be averaged to constitute one SUBLLOT sample. The Percent Within Limits (PWL) for the LOT shall then be calculated in accordance with Item 501-5.3, Price Adjustment, of the Special Provisions using the sampled core compressive strengths and the Compressive Test formula. The final Price Adjustment shall be based on the PWL calculated using the sampled core compressive strengths. The test results of the resampled pavement are final. All costs associated with resampling, including, but not limited to testing, curing, and coring the concrete samples shall be borne by the contractor, regardless as to whether the test results increase or decrease calculated payment quantity of concrete pavement.
2. When Flexural Test Specification (501-3.6(B) Proportions) is specified. The two (2) specimens from each SUBLLOT shall be averaged to constitute one SUBLLOT sample. The SUBLLOT samples shall then be averaged to obtain a LOT average. In order for the contractor to increase concrete payment quantity back to 100%, the LOT average shall

be at least 6500 psi, and no individual SUBLOT sample shall be less than 6000 psi. Both the LOT average and SUBLOT sample strength requirements must be met in order for the concrete payment quantity to change back to 100%. If both requirements are not met, then the original concrete payment quantity calculated based on the Percent Within Limits (PWL) as outlined in 501-5.3, Price Adjustment, of the Special Provisions shall still apply. The test results of the resampled pavement are final. All costs associated with resampling, including, but not limited to testing, curing, and coring the concrete samples shall be borne by the contractor, regardless as to whether the test results increase or decrease calculated payment quantity of concrete pavement.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 90-1, dated January 1, 2001

**Illinois Department of Transportation  
Division of Aeronautics  
Materials Section**

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POLICY MEMORANDUM

January 1, 2004

Springfield

Number 95-1

TO: CONSULTING ENGINEERS

SUBJECT: FIELD TEST PROCEDURES FOR MIXER PERFORMANCE AND CONCRETE UNIFORMITY TESTS

I. SCOPE

These methods describe the procedures for obtaining and testing representative samples of fresh concrete in the field to determine the consistency and mixer efficiency of stationary mixers at different mixing time periods.

The concrete produced during the mixing time investigation and not used in the test program may be incorporated in the project provided it conforms to the Standard Specifications for Construction of Airports.

A maximum of two mixing times shall be considered by the Department.

The contractor shall provide all of the necessary equipment and personnel to perform the tests and the Department will observe the testing.

II. APPARATUS REQUIRED

- a. Three (3) air meters conforming to the requirements of ASTM C231 or ASTM C173.
- b. Three (3) slump cone kits conforming to ASTM C143.
- c. One (1) No. 4 sieve having a minimum screen area of 2 sq. ft. The sieve shall conform to the requirements of AASHTO M92.
- d. One (1) platform scale graduated in tenths of a pound having a capacity sufficient to perform tests herein after specified.
- e. One (1) hydraulic or mechanical testing machine conforming to the requirements of the specified testing method for the project (ASTM C39 or ASTM C78).

- f. Flexural strength specimen forms as required. The forms shall be nominally 6x6x30 inch. Means shall be provided for securing the base plate firmly to the mold. The inside surfaces of the mold shall be smooth and free from holes, indentations, or ridges. The sides, bottom, and ends shall be at right angles and shall be straight and true so that the specimens will not be warped. Maximum variation from the nominal cross-section shall not exceed 1/8 inch. The assembled mold and base plate shall be lightly coated with mineral oil or other approved form release oil before use. Compressive strength specimens shall be 6x12 inch and prepared in accordance with ASTM C31.
- g. Sufficient water tanks for curing specimens as required by ASTM C31.
- h. Small tools such as shovels, scoops, buckets, etc., and water shall be furnished, as required.

### III. MIXER

The mixer for which the mixing time is to be evaluated shall conform to the applicable sections of the Standard Specifications for Construction of Airports.

### IV. MIXING TIME REQUIREMENTS

The minimum mixing time to be evaluated shall be specified in the Standard Specifications for Construction of Airports.

### V. PROCEDURE

A minimum of ten (10) batches per drum shall be tested and evaluated for each original reduced mixing time request. Check tests shall consist of three (3) batches.

If the request is for a new, twin drum mixer, ten (10) batches shall be tested for the first drum and three (3) for the second drum.

Check tests are required if the mixer is moved, major maintenance performed, or if the source or type of aggregate has changed. A minimum frequency of check tests shall be one (1) per year.

#### a. Mixing Time

The mixing time and batch size to be evaluated shall be proposed by the contractor. The mixing time shall begin when all solid materials are in the mixing drum. The mixer timer shall register or indicate accurately the mixing time and a tolerance of two (2) seconds will be permitted.

If approved by the Engineer, minor adjustments in admixture dosage and water content will be allowed to account for weather conditions, provided that the maximum w/c ratio is not exceeded.

b. Sampling

At the conclusion of the mixing cycle, the mixer shall be discharged and appropriate samples obtained from the first, middle, and last third portions of the batch. Any appropriate method may be used, provided the samples are representative of the respective portions and not the very ends of the batch.

As an alternative, the mixer may be stopped, and the samples removed by any suitable means at equally spaced points from the front to the back of the drum.

c. Testing.

1. Each third portion of the batch shall be tested simultaneously. The Contractor shall provide sufficient personnel to meet this requirement. The Contractor personnel performing the testing shall be Level I PCC Technicians or Concrete Testers. However, a Level I PCC Technician shall be provided to supervise the Concrete Tester.
2. From each third portion of the batch the mass (weight) of the concrete in one air meter measuring bowl shall be determined.
3. The air content of each third portion of the batch shall be determined according to ASTM C231 or ASTM C173. The air content shall be the arithmetic average of two (2) tests from each third portion of the batch.
4. The slump of each third portion of the batch shall be determined according to ASTM C143. The slump shall be the arithmetic average of two (2) tests from each third portion of the batch.
5. Flexural strength specimen(s) (two (2) breaks required) or two (2) compressive strength specimens shall be prepared from each third portion of the batch according to ASTM C31. Flexural strength specimen(s) (two (2) breaks required) shall be tested according to ASTM C78 at seven (7) days of age. Compressive strength specimens shall be tested according to ASTM C39 at seven (7) days of age.
6. The contents from the weighed air meter measuring bowl shall be washed over a No. 4 sieve. Shake as much water as possible from the material retained on the sieve and then weigh the material. The coarse aggregate content (portion of mass (weight) of sample retained on a No. 4 sieve), expressed as a percent, shall be calculated.



VI. CONCRETE UNIFORMITY REQUIREMENTS

- a. Test results from each third portion of the batch shall be compared to one another according to Table 1. Each batch shall be evaluated individually.
- b. Mixer performance tests consisting of ten (10) batches: If more than seven (7) tests out of the total or more than three (3) in any one criteria are not in compliance with the uniformity requirements (air content, slump, coarse aggregate content, and strength), a reduced mixing time will not be granted.
- c. Mixer performance tests consisting of three (3) batches: If more than three (3) tests out of the total are not in compliance with the uniformity requirements, a full ten (10) batch investigation shall be required.

**Table 1.** Requirements for Uniformity of Concrete

Test	Requirement (Note 1)
Air Content, percent by volume of concrete	1.0 (Note 2)
Slump, inch	1.0 (Note 3)
Coarse aggregate content, portion by weight of each sample retained on the No. 4 sieve, percent	6.0
Average flexural or compressive strength at 7 days for each sample based on average strength of all comparative test specimens, percent	7.5 (Note 4)

Note 1. Expressed as maximum permissible difference in results of tests of samples taken from three locations in the concrete batch.

Note 2. The average air content sample shall be the arithmetic average of two (2) tests.

Note 3. The average slump sample shall be the arithmetic average of two (2) tests.

Note 4. The average flexural strength of each sample shall be the arithmetic average of two (2) beam breaks. The average compressive strength of each sample shall be the arithmetic average of two (2) cylinder breaks.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 95-1 dated January 1, 1995

State of Illinois  
Department of Transportation  
Division of Aeronautics

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**POLICY MEMORANDUM**

April 1, 2010

Springfield

Number 96-1

TO: CONSULTING ENGINEERS

SUBJECT: ITEM 610, STRUCTURAL PORTLAND CEMENT CONCRETE:  
JOB MIX FORMULA APPROVAL & PRODUCTION TESTING.

- I. This policy memorandum addresses the Job Mix Formula (JMF) approval process and production testing requirements when Item 610 is specified for an airport construction contract.
- II. PROCESS
  - a. The contractor may submit a mix design with recent substantiating test data or he may submit a mix design generated by the Illinois Division of Highways with recent substantiating test data for approval consideration. The mix design should be submitted to the Resident Engineer.
  - b. The Resident Engineer should verify that each component of the proposed mix meets the requirements set forth under Item 610 of the *Standard Specifications for Construction of Airports* and/or the contract special provisions.
  - c. The mix design should also indicate the following information:
    1. The name, address, and producer/supplier number for the concrete.
    2. The source, producer/supplier number, gradation, quality, and SSD weight for the proposed coarse and fine aggregates.
    3. The source, producer/supplier number, type, and weight of the proposed flyash and/or cement.
    4. The source, producer/supplier number, dosage rate or dosage of all admixtures.
  - d. After completion of Items b and c above, the mix with substantiating test data shall be forwarded to the Division of Aeronautics for approval. Once the mix has been approved, the production testing shall be at the rate in Section III as specified herein.

### III. PRODUCTION TESTING

- a. One set of cylinders or beams, depending on the strength specified, shall be cast for acceptance testing for each day the mix is used. In addition, at least one slump and one air test shall be conducted for each day the mix is used. If more than 100 c.y. of the mix is placed in a given day, additional tests at a frequency of 1 per 100 c.y. shall be taken for strength, slump, and air. The concrete shall have a maximum slump of three inches (3") and minimum slump of one inch (1") when tested in accordance with ASTM C-143. The air content of the concrete shall be between 5% and 8% by volume. At no time shall the temperature of the concrete exceed 90 degrees Fahrenheit.
- b. If the total proposed amount of Item 610 Structural Portland Cement Concrete as calculated by the Resident Engineer is less than 50 c.y. for the entire project, the following shall apply:
  - The Resident Engineer shall provide calculations of the quantity of Item 610 to the Division of Aeronautics.
  - One set of cylinders or beams, depending the strength specified, shall be cast for acceptance testing.
  - One air content and one slump test shall be taken for acceptance testing.
  - The concrete shall have a maximum slump of three inches (3") and minimum of one inch (1") when tested in accordance with ASTM C-143. The air content of the concrete shall be between 5% and 8% by volume. At no time shall the temperature of the concrete exceed 90 degrees Fahrenheit.
- c. The Resident Engineer shall collect actual batch weight tickets for every batch of Item 610 concrete used for the project. The actual batch weight tickets shall be kept with the project records and shall be available upon request of the Department of Transportation.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 96-1 dated January 1, 2004

State of Illinois  
Department of Transportation  
Division of Aeronautics

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**POLICY MEMORANDUM**

April 1, 2010

Springfield, Illinois

Number 96-2

TO: CONTRACTORS

SUBJECT: REQUIREMENTS FOR LABORATORY, TESTING, QUALITY CONTROL, AND PAVING OF HMA CONCRETE MIXTURES

I. SCOPE

The purpose of this policy memorandum is to define to the Contractor the requirements concerning the laboratory, testing, Quality Control, and paving of HMA (Hot Mix Asphalt) mixtures. References are made to the most recent issue of the Standard Specifications for Construction of Airports and to American Society for Testing and Materials (ASTM) testing methods. The Quality Assurance and acceptance responsibilities of the Resident Engineer/Consultant are described in Policy Memorandum 96-3.

II. LABORATORY

The Contractor shall provide a laboratory located at the plant and approved by the Illinois Division of Aeronautics (IDA). The laboratory shall be of sufficient size and be furnished with the necessary equipment and supplies for adequately and safely performing the Contractor's Quality Control testing as well as the Resident Engineer's acceptance testing as described in Policy Memorandum 96-3.

The effective working area of the laboratory shall be a minimum of 600 square feet with a ceiling height of not less than 7.5 feet. Lighting shall be adequate to illuminate all working areas. It shall be equipped with heating and air conditioning units to maintain a temperature of 70° F ± 5° F.

The laboratory shall have equipment that is in good working order and that meets the requirements set forth in the following ASTM test standards:

ASTM C 117	Test Method for Materials Finer than 75 µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM C 566	Total Moisture Content of Aggregate by Drying
ASTM D 75	Sampling Aggregates
ASTM D 1559	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
ASTM D 2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
IDOT	Ignition Method for Determining Asphalt Content

ASTM D 2726	Bulk Specific Gravity of Compacted Bituminous Mixtures using Saturated Surface Dry Specimens
ASTM D 3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D 2950	Density of Bituminous Concrete in Place by Nuclear Method
ASTM D 4125	Asphalt Content of Bituminous Mixtures by Nuclear Method
ASTM C 127	Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate
ASTM C 128	Standard Test Method for Specific Gravity and Absorption of Fine Aggregate

The Asphalt Institute's *Mix Design Methods for Asphalt Concrete Manual No. 2 (MS-2)*

The laboratory and equipment furnished by the Contractor shall be properly calibrated and maintained. The Contractor shall maintain a record of calibration results at the laboratory. The Engineer may inspect measuring and testing devices at any time to confirm both calibration and condition. If the Resident Engineer determines that the equipment is not within the limits of dimensions or calibration described in the appropriate test method, he may stop production until corrective action is taken. If laboratory equipment becomes inoperable or insufficient to keep up with mix production testing, the Contractor shall cease mix production until adequate and/or sufficient equipment is provided.

### III. MIX DESIGN SUBMITTAL

Based upon data and test results submitted by the Contractor, the Illinois Division of Aeronautics Engineer of Construction & Materials shall issue the final Job Mix Formula (JMF) approval letter that concurs or rejects the Contractor's proposed JMF. The Contractor will be required to perform the sampling and laboratory testing and develop a complete mix design, according to the following guidelines: [Note: A testing summary chart can be found in Appendix B.]

- A. Material sources meeting the requirements of the contract shall be submitted in writing at or before the preconstruction conference (see BITUMINOUS WORKSHEET in Appendix A) in the following format:
1. To: Steven J. Long, P.E., Acting Chief Engineer  
Attn: Michael F. Wilhelm, P.E., Engineer of Construction & Materials  
Division of Aeronautics  
One Langhorne Bond Drive  
Springfield, Illinois 62707
  2. Producer name and location of each aggregate
  3. Producer # for each aggregate (producers are assigned this number by IDOT Central Bureau of Materials)
  4. Material code for each aggregate
  5. Gradation and Quality designation for each aggregate (i.e. CA-11, etc.)
  6. Producer, producer #, and specific gravities of asphalt cement

7. Performance Graded Binder 64-22 shall be used unless otherwise approved by the IDA Engineer of Construction & Materials.
- B. The Contractor shall obtain representative samples of each aggregate. The individual obtaining samples shall have successfully completed the IDOT Aggregate Technician Course under the IDOT Division of Highways, QC/QA program. The sample size shall be approximately 280 lb. for each coarse aggregate, 150 lb. for each fine aggregate, 15 lb. for the mineral filler or collected dust, and 1 gallon of asphalt cement.
- C. The Contractor shall split the aggregate samples down and run gradation tests according to the testing methods referenced in Appendix B of this memorandum. The remaining aggregates shall be set aside for further Mix Design testing. The results of the gradation tests, along with the most recent stockpile gradations, shall be reported by fax to the IDA Engineer of Construction & Materials for engineering evaluation. If the gradation results are deemed non-representative or in any way unacceptable, new representative samples may be required at the direction of the IDA Engineer of Construction & Materials. Only composite gradations are required under this procedure.
- D. Based on the accepted gradation results, the Contractor will determine blend percentages in accordance with the contract specifications (see Section 401/403 – 3.2 JOB MIX FORMULA under Table 4) for each aggregate to be used in determining the Job Mix Formula, as well as mix temperature and asphalt content(s), and number of Marshall Blows for preparation of the Marshall Mix Design or number of gyrations for Superpave Mix Design, depending on which design is specified in the contract. The Contractor will verify the aggregate percentages, mix temperatures, asphalt content(s), and number of Marshall blows (or gyrations) with the IDA Engineer of Construction & Materials before beginning any testing.
- E. After verification of the information from step D., the Contractor shall make specimens and perform the following tests at various asphalt contents in order to obtain the optimum mix design. [Note: Actual test designation is referenced in Appendix B of this memorandum.]

**Marshall Tests**

Maximum Specific Gravity -- " $G_{mm}$ "

Bulk Specific Gravity -- " $G_{sb}$ "

Marshall Stability

Marshall Flow

% air voids

- The JMF will be designed in accordance with Table 2 as modified in Section 401 – 3.2 or 403 – 3.2, depending on the type of mix being produced. Appendix C contains a copy of the Table 2 targets and ranges for the JMF.
- F. All technicians who will be performing mix design testing and plant sampling/testing shall have successfully completed the IDOT Division of Highways HMA Concrete Level 1 Technician Course "HMA Concrete Testing". The Contractor may also provide a Gradation Technician who has successfully completed the Department's "Gradation Technician Course" to run gradation tests only under the supervision of a HMA Concrete Level 2 Technician.
- G. The mix design testing results and resulting optimal JMF shall be reported to the IDA Engineer of Construction & Materials with the following data included:
- a) Aggregate & liquid asphalt material codes
  - b) Aggregate & liquid asphalt producer numbers, names, and locations
  - c) Aggregate Blend of each aggregate
  - d) Optimum Blend % for each sieve
  - e) AC Specific Gravity
  - f) Bulk Specific Gravity and Absorption for each aggregate

- g) Summary of Marshall Design Data: AC % Mix, Stability, Flow,  $G_{mb}$ ,  $G_{mm}$ , VMA, Voids (Total Mix), Voids Filled
- h) Optimum design data listing AC % Mix, Stability, Flow,  $G_{mb}$ ,  $G_{mm}$ , VMA, Voids (Total Mix), Voids Filled
- i) Percent of asphalt that any RAP will add to the mix
- j) Graphs for the following: gradation on 0.45 Power Curve, AC vs. Voids (Total Mix), AC vs. Specific Gravities, AC vs. Voids Filled, AC vs. Stability, AC vs. Flow and VMA

- H. The IDA Engineer of Construction & Materials shall generate and issue a concurrence or rejection of the Contractor's proposed Mix Design with the JMF for the manufacture of HMA mixtures based upon the Contractor's submitted testing and complete mix design results. The Contractor shall not be permitted to use the proposed HMA mix in production for the project until this concurrence letter is issued to the Contractor by the IDA Engineer of Construction & Materials, and the mix passes all test section requirements, when a test section is specified.
- I. The above procedure, III. MIX DESIGN SUBMITTAL shall be repeated for each change in source or gradation of materials.

#### IV. MIX PRODUCTION TESTING

The Quality Control of the manufacture and placement of HMA mixtures is the responsibility of the Contractor. The Contractor shall perform or have performed the inspection and tests required to assure conformance to contract requirements. Quality Control includes the recognition of defects and their immediate correction. This may require increased testing, communication of test results to the plant or the job site, modification of operations, suspension of HMA mix production, rejection of material, or other actions as appropriate. The Resident Engineer shall be immediately notified of any failing tests and subsequent remedial action. Form AER M-14 shall be reported to the Engineer and Resident Engineer no later than the start of the next work day. In addition, AER M-9 and M-11 shall be given to the Resident Engineer daily. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for Quality Control. This individual shall have successfully completed the IDOT Division of Highways HMA Concrete Level II Technician Course "HMA Concrete Proportioning and Mixture Evaluation." In addition to the QC Manager, the Contractor shall provide sufficient and qualified personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. The following plant tests and documentation shall be required: [Note: A summary chart of testing can be found in Appendix B.]

- A. Minimum of one (1) complete hot bin or combined belt analysis per day of production or every 1,000 tons, whichever is more frequent.
- B. Minimum one (1) stockpile gradation for each aggregate and/or mineral filler per week when a batch plant is utilized. Minimum of one (1) gradation for each aggregate per day of production or every 1,000 tons when a drum plant is used, and one (1) gradation per week for mineral filler when a drum plant is used.
- C. A certification from the quarry for the total quantity of aggregate listing the source, gradation type, and quality designation of aggregate shipped.
- D. Original asphalt shipping tickets listing the source and type of asphalt shipped.
- E. One mix sample per 1,000 tons of mix. The sample shall be split in half. One half shall be reserved for testing by the Engineer. The other half shall be split and tested by the Contractor for Marshall, Extraction, Gradation, Maximum Specific Gravity, and Air Void tests in accordance with the appropriate ASTM standard referenced herein. [See Appendix B.]
  - 1. In place of the extraction test, the Contractor may provide the asphalt content by a calibrated ignition oven test using the IDOT Division of Highways' latest procedure. The

correction (calibration) factor for aggregate type shall be clearly indicated in the reported test results.

From these tests, the Contractor shall interpret the test data and make necessary adjustments to the production process in order to comply with the approved JMF.

V. QUALITY CONTROL

A. Control Limits

Target values shall be determined from the approved JMF. The target values shall be plotted on the control charts within the following control limits:

<u>Parameter</u>	<u>Control Limits</u>	
	<u>Individual Test</u>	<u>Moving Avg. of 4</u>
% Passing		
1/2 in.	± 7 %	± 4 %
No. 4	± 7 %	± 4 %
No. 8	± 5 %	± 3 %
No. 30	± 4 %	± 2.5 %
No. 200 *	± 2.0 % *	± 1.0 % *
Asphalt Content	± 0.45 %	± 0.2 %

\* No. 200 material percents shall be based on washed samples. Dry sieve gradations (-200) shall be adjusted based on anticipated degradation in the mixing process.

B. Control Charts

Standardized control charts shall be maintained by the Contractor at the field laboratory. The control charts shall be displayed and be accessible at the field laboratory at all times for review by the Engineer. The individual required test results obtained by the Contractor shall be recorded on the control chart immediately upon completion of a test, but no later than 24 hours after sampling. Only the required plant tests and resamples shall be recorded on the control chart. Any additional testing of check samples may be used for controlling the Contractor's processes, but shall be documented in the plant diary.

The results of assurance tests performed by the Resident Engineer will be posted as soon as available.

The following parameters shall be recorded on control charts:

1. Combined Gradation of Hot-Bin or Combined Belt Aggregate Samples (Drier Drum). (% Passing 1/2 in., No. 4., No. 8, No. 30, and No. 200 Sieves)
2. Asphalt Content
3. Bulk Specific Gravity of Marshall Sample
4. Maximum Specific Gravity of Mixture

C. Corrective Action for Required Plant Tests

Control Limits for each required parameter, both individual tests and the average of four tests, shall be exhibited on control charts. Test results shall be posted within the time limits previously outlined.



1. Individual Test Result. When an individual test result exceeds its control limit, the Contractor shall immediately resample and retest. If at the end of the day no material remains from which to resample, the first sample taken the following day shall serve as the resample as well as the first sample of the day. This result shall be recorded as a retest. If the retest passes, the Contractor may continue the required plant test frequency. Additional check samples should be taken to verify mix compliance.
2. Asphalt Content. If the retest for asphalt content exceeds control limits, mix production shall cease and immediate corrective action shall be instituted by the Contractor. After corrective action, mix production shall be restarted, the mix production shall be stabilized, and the Contractor shall immediately resample and retest. Mix production may continue when approved by the Engineer. The corrective action shall be documented.

Inability to control mix production is cause for the Engineer to stop the operation until the Contractor completes the investigation identifying the problems causing failing test results.

3. Combined Aggregate/Hot-Bin. For combined aggregate/hot-bin retest failures, immediate corrective action shall be instituted by the Contractor. After corrective action, the Contractor shall immediately resample and retest. The corrective action shall be documented.
  - a. Moving Average. When the moving average values trend toward the moving average control limits, the Contractor shall take corrective action and increase the sampling and testing frequency. The corrective action shall be documented.

The Contractor shall notify the Engineer whenever the moving average values exceed the moving average control limits. If two consecutive moving average values fall outside the moving average control limits, the Contractor shall cease operations. Corrective action shall be immediately instituted by the Contractor. Operations shall not be reinstated without the approval of the Engineer. Failure to cease operations shall subject all subsequently produced material to be considered unacceptable.
  - b. Mix Production Control. If the Contractor is not controlling the production process and is making no effort to take corrective action, the operation shall stop.

## VI. TEST SECTION AND DENSITY ACCEPTANCE **(Note: Applies only when specified.)**

- A. The purpose of the test section is to determine if the mix is acceptable and can be compacted to a consistent passing density.

A quick way to determine the compactibility of the mix is by the use of a nuclear density gauge in the construction of a growth curve. An easy way to construct a growth curve is to use a good vibratory roller. To construct the curve, an area the width of the roller in the middle of the mat is chosen and the roller is allowed to make one compactive pass. With the roller stopped some 30 feet away, a nuclear reading is taken and the outline of the gauge is marked on the pavement. The roller then makes a compactive pass in the opposite direction and another reading is taken. This scenario is continued until at least two (2) passes are made past the maximum peak density obtained.

The maximum laboratory density potential of a given mix is a direct function of the mix design air voids. Whereas, the actual maximum field density is a function of the type of coarse aggregates, natural or manufactured sands, lift thickness, roller type (static or vibratory), roller and paver speed, base condition, mix variation, etc. All of these items are taken into consideration with the growth curve.

1. High Density in the Growth Curve. If the growth curve indicates a maximum achievable field density of between 95 to 98 percent of the Theoretical Maximum Density (D), you can proceed with the Rolling Pattern. On the other hand, if the maximum achievable density is greater than 98 percent, a quick evaluation (by use of an extractor, hot bin gradations, nuclear asphalt determinator, etc.) must be made of the mix. When adjustments are made in the mix, a new growth curve shall be constructed.
2. Low Density in the Growth Curve. If the growth curve indicates the maximum achievable density is below 94 percent, a thorough evaluation of the mix, rollers, and laydown operations should be made. After a thorough evaluation of all factors (mix, rollers, etc.), asphalt or gradation changes may be in order as directed by the Engineer. Again, any changes in the mix will require a new growth curve. Note that the nuclear density test is a quality control tool and not an acceptance test. All acceptance testing is to be conducted by the use of cores, unless otherwise specified.
3. Acceptance of Test Section. The Contractor may proceed with paving the day after the test section provided the following criteria have been met:
  - a. Four random locations (2 cores per location cut longitudinally and cored by the Contractor) will be selected by the Engineer within the test strip. No individual core can be below a minimum of 94% density.
  - b. All Marshall and extraction test results from mix produced for the test section must be within the tolerances required by specification.
  - c. The Contractor shall correlate his nuclear gauge to the cores taken in the test section. Additional cores may be taken at the Contractor's expense for this purpose within the test section area, when approved by the Engineer.
4. Density Acceptance under Production Paving. The responsibility for obtaining the specified density lies with the Contractor. Therefore, it is important that the nuclear density gauge operator communicate with the roller operators to maintain the specified density requirements. The Contractor shall provide a qualified HMA Density Tester who has successfully completed the Department's "HMA Concrete Nuclear Density Testing Course" to run all required density tests on the job site. Density acceptance testing, unless otherwise specified, is described as follows:
  - a. The Contractor shall cut cores at random locations within 500 ton sublots as directed by the Resident Engineer.
  - b. The cores should be extracted so as not to damage them, since they are used to calculate the Contractor's pay.
  - c. The Resident Engineer will run preliminary  $G_{mb}$  tests on the cores to give the Contractor an indication of how compaction is running for the next day's paving.

- d. A running average of four (4) Maximum Theoretical Gravities ( $G_{mm}$ ) will be used for calculating percent compaction.
- e. Final core density tests and pay calculations will be performed by the Resident Engineer and delivered to the Contractor.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 96-2 dated January 16, 2007.

# **APPENDIX A**

# BITUMINOUS WORKSHEET

Airport: \_\_\_\_\_ Project No.: \_\_\_\_\_ AIP No.: \_\_\_\_\_

Mix Design #: \_\_\_\_\_ Material Code: \_\_\_\_\_ Producer: \_\_\_\_\_  
Prod. #: \_\_\_\_\_

## AGGREGATE

Mat'l. Code: \_\_\_\_\_

Producer #: \_\_\_\_\_

Prod. Name \_\_\_\_\_

Location: \_\_\_\_\_

## Percent Passing

### Sieve Size

1 inch \_\_\_\_\_

3/4 inch \_\_\_\_\_

1/2 inch \_\_\_\_\_

3/8 inch \_\_\_\_\_

No. 4 \_\_\_\_\_

No. 8 \_\_\_\_\_

No. 16 \_\_\_\_\_

No. 30 \_\_\_\_\_

No. 50 \_\_\_\_\_

No. 100 \_\_\_\_\_

No. 200 \_\_\_\_\_

Washed (y/n) \_\_\_\_\_

O.D. Gravity \_\_\_\_\_

App. Gravity \_\_\_\_\_

Absorption \_\_\_\_\_

Asphalt Gravity \_\_\_\_\_ Asphalt Source \_\_\_\_\_ Asphalt Producer No. \_\_\_\_\_

## MARSHALL DATA

% Asphalt \_\_\_\_\_

M. Stability \_\_\_\_\_

Flow \_\_\_\_\_

D \_\_\_\_\_

d \_\_\_\_\_

% Air Voids \_\_\_\_\_

Q.C. Manager Name: \_\_\_\_\_ Phone number: \_\_\_\_\_

Laboratory Location: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Remarks: \_\_\_\_\_

# **APPENDIX B**

**QUALITY CONTROL TESTING (PLANT)**

<b>PARAMETER</b>	<b>FREQUENCY</b>	<b>SAMPLE SIZE</b>	<b>TEST METHOD</b>	<b>REPORT FORM</b>
Aggregate Gradations: Hot bins for batch and continuous plants--- Individual cold-feeds or combined belt-feeds for drier drum plants.	Minimum 1 per day of production and at least 1 per 1000 tons.	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm 1 gallon asphalt cement	ASTM C 136	AER M-9
Aggregate gradations: Stockpiles	Minimum 1 per aggregate per week per stockpile.	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm *Note: The above test sample sizes are to be obtained from splitting down a larger sample from the stockpiles.	ASTM C 136	AER M-9
Maximum Specific Gravity	Minimum 1 per 1000 tons	1200 gm per test	ASTM D 2041	AER M-11 and AERM-14
Bulk Specific Gravity	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 2726	AER M-11 and AERM-14
Marshall Stability and Flow	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 1559	AER M-11 and AERM-14
% Air Voids	Minimum 1 per 1000 tons		ASTM D 3203	AER M-11 and AERM-14
Extraction	Minimum 1 per 1000 tons	1000 gm (surface) 1500 gm (base)	ASTM D 2172	AER M-11 and AERM-14
Ignition Oven Test	Minimum 1 per 1000 tons	1500 gm		AER M-14
Nuclear Asphalt Gauge	Minimum 1 per 1000 tons	1000-1100 gm	ASTM D 2145	AER M-14

### MIX DESIGN TESTING

<b>PARAMETER</b>	<b>FREQUENCY</b>	<b>SAMPLE SIZE</b>	<b>TEST METHOD</b>	<b>REPORT FORM</b>
Representative samples of each aggregate and asphalt cement.	1 per aggregate and 1 asphalt cement.	280 lb. (coarse) 150 lb. (fine) 15 lb. (min. filler) 1 gallon asphalt cement	ASTM D 75	N/A
Aggregate Gradation	1 per aggregate	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm	ASTM C 136	Bituminous Worksheet (Appendix A)
Maximum Specific Gravity	2 per specified asphalt content	1200 gm per test	ASTM D 2041	Bituminous Worksheet (Appendix A)
Bulk Specific Gravity	3 briquettes per specified asphalt content	1250 gm per briquette	ASTM D 2726	Bituminous Worksheet (Appendix A)
Marshall Stability and Flow	3 briquettes	1250 gm per briquette	ASTM D 1559	Bituminous Worksheet (Appendix A)
% Air Voids	1 per specified asphalt content (Avg. of $G_{sb}/G_{mm}$ )		ASTM D 3203	Bituminous Worksheet (Appendix A)



**QUALITY CONTROL TESTING (PAVER)**

<b>PARAMETER</b>	<b>FREQUENCY</b>	<b>SAMPLE SIZE</b>	<b>TEST METHOD</b>	<b>REPORT FORM</b>
Nuclear Density Test	As required by the Contractor to maintain consistent passing density	Various locations	ASTM D 2950	

# APPENDIX C

**AGGREGATE HMA BASE COURSE**

<b>Percentage by Weight Passing Sieves Job Mix Formula (JMF)</b>		
<b>Sieve Size</b>	<b>Gradation B Range 1" Maximum</b>	<b>Ideal Target</b>
1-1/4 in.	---	---
1 in.	100	100
3/4 in.	93 – 97	95
1/2 in.	75 – 79	77
3/8 in.	64 – 68	66
No. 4	45 – 51	48
No. 8	34 – 40	37
No. 16	27 – 33	30
No. 30	19 – 23	21
No. 100	6 – 10	8
No. 200	4 – 6	5
<b>Bitumen %:</b>		
<b>Stone</b>	<b>4.5 – 7.0</b>	<b>5.5</b>

**AGGREGATE HMA SURFACE COURSE**

<b>Percentage by Weight Passing Sieves Job Mix Formula (JMF)</b>		
<b>Sieve Size</b>	<b>Gradation B Range <sup>3</sup>/<sub>4</sub>" Maximum</b>	<b>Ideal Target</b>
1 in.	100	---
3/4 in.	100	100
1/2 in.	99 - 100	100
3/8 in.	91 - 97	94
No. 4	56 - 62	59
No. 8	36 - 42	39
No. 16	27 - 32	30
No. 30	19 - 25	22
No. 100	7 - 9	8
No. 200	5 - 7	6
<b>Bitumen %: Stone</b>	<b>5.0 - 7.0</b>	<b>6.0</b>

State of Illinois  
Department of Transportation  
Division of Aeronautics

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**POLICY MEMORANDUM**

January 1, 2004

Springfield, Illinois

Number 96-3

TO: CONSULTING ENGINEERS

SUBJECT: REQUIREMENTS FOR QUALITY ASSURANCE ON PROJECTS  
WITH BITUMINOUS CONCRETE PAVING

I. SCOPE

The purpose of this policy memorandum is to define to the Consulting Engineer the requirements concerning Quality Assurance on bituminous concrete paving projects. Specifically, this memo applies whenever the Contractor is required to comply with the requirements set forth in Policy Memorandum 96-2, "*Requirements for Laboratory, Testing, Quality Control, and Paving of Bituminous Concrete Mixtures*".

II. LABORATORY APPROVAL

The Resident Engineer shall review and approve the Contractor's plant laboratory to assure that it meets the requirements set forth in the contract specifications and Policy Memorandum 96-2. This review and approval shall be completed prior to utilization of the plant for the production of any mix.

III. QUALITY ASSURANCE DURING PRODUCTION PAVING

A. At the option of the Engineer, independent assurance tests may be performed on split samples taken by the Contractor for Quality Control testing. In addition, the Resident Engineer shall witness the sampling and splitting of these samples at the start of production and as needed throughout mix production. The Engineer may select any or all split samples for assurance testing. These tests may be performed at any time after sampling. The test results will be made available to the Contractor as soon as they become available.

B. The Resident Engineer may witness the sampling and testing being performed by the Contractor. If the Resident Engineer determines that the sampling and Quality Control tests are not being performed according to the applicable test procedures, the Engineer may stop production until corrective action is taken. The Resident Engineer will promptly notify the Contractor, both verbally and in writing, of observed deficiencies. The Resident Engineer will document all witnessed samples and tests. The Resident Engineer may elect to obtain samples for testing, separate from the Contractor's Quality Control process, to verify specification compliance.

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

<u>Test Parameter</u>	<u>Acceptable Limits of Precision</u>
% Passing	
1/2 in.	5.0 %
No. 4	5.0 %
No. 8	3.0 %
No. 30	2.0 %
No. 200	2.2 %
Asphalt Content	0.3 %
Maximum Specific Gravity of Mixture	0.026
Bulk Specific Gravity of Marshall Sample	0.045

2. In the event a comparison of the required plant test results is outside the above acceptable limits of precision, split or independent samples fail the control limits, an extraction indicates non-specification mix, or a continual trend of difference between Contractor and Engineer test results is identified, the Engineer will immediately investigate. The Engineer may suspend production while the investigation is in progress. The investigation may include testing by the Engineer of any remaining split samples or a comparison of split sample test results on the mix currently being produced. The investigation may also include review and observation of the Contractor's technician performance, testing procedure, and equipment. If a problem is identified with the mix, the Contractor shall take immediate corrective action. After corrective action, both the Contractor and the Engineer shall immediately resample and retest.

- C. The Contractor shall be responsible for documenting all observations, records of inspection, adjustments to the mixture, test results, retest results, and corrective actions in a bound hardback field book or bound diary which will become the property of IDA upon completion and acceptance of the project. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the Contractor's Consultants, or the producer of bituminous mix material. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

Results of adjustments to mixture production and tests shall be recorded in duplicate and sent to the Engineer.

#### IV. ACCEPTANCE BY ENGINEER

Density acceptance shall be performed according to Policy Memorandum 87-2, or according to the acceptance procedure outlined in the Special Provisions.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 96-3 dated January 1, 1997

State of Illinois  
Department of Transportation  
Division of Aeronautics

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**POLICY MEMORANDUM**

January 1, 2004

Springfield, Illinois

Number 97-2

TO: CONSULTING ENGINEERS

SUBJECT: PAVEMENT MARKING PAINT ACCEPTANCE

I. SCOPE

The purpose of this policy memorandum is to define the procedure for acceptance of pavement marking paint.

II. RESIDENT ENGINEER'S DUTIES

The Resident Engineer shall follow the acceptance procedure outlined as follows:

- A. Require the painting contractor to furnish the name of the paint manufacturer and the batch number proposed for use prior to beginning work. Notify the I.D.A. Materials Certification Engineer when this information is available.
- B. Require the manufacturer's certification before painting begins. Check the certification for compliance to the contract specifications.
  1. The certification shall be issued from the manufacturer and shall include the specification and the batch number.
  2. The paint containers shall have the manufacturer's name, the specification and the batch number matching the certification.
- C. If no batch number is indicated on the certification or containers, sample the paint according to the procedure for the corresponding paint type.
- D. If the I.D.A. Engineer of Materials indicates that batch number has not been previously sampled and tested, sample the paint according to the procedure for the corresponding paint type. The Division of Aeronautics will provide paint cans upon request by the Resident Engineer. Samples will only be taken in new epoxy lined cans so that the paint will not be contaminated. It is important to seal the sample container immediately with a tight cover to prevent the loss of volatile solvents.



Mark the sample cans with the paint color, manufacturer's name, and batch number. The paint samples and manufacturer's certification shall be placed in the mail within 24 hours after sampling. Address the samples to the Materials Certification Engineer at:

Illinois Department of Transportation  
Division of Aeronautics  
One Langhorne Bond Drive  
Springfield, Illinois 62707

Sampling Procedures for Each Paint Type:

1. Waterborne or Solvent Base Paints
  - a. Take the paint sample from the spray nozzle when the contractor begins marking. A sample consists of two one-pint cans taken per batch number.
  - b. Be sure to indicate to the contractor that acceptance of material is based upon a passing test of the paint material.
  
2. Epoxy Paint
  - a. Take separate one-pint samples of each paint component prior to marking. Before drawing samples, the contents of each component's container must be thoroughly mixed to make certain that any settled portion is fully dispersed. **Do not combine the two components or sample from the spray nozzle.**
  - b. Be sure to indicate to the contractor that acceptance of material is based upon a passing test of the paint material.

III. TESTING

The paint will be tested for acceptance by the IDOT Bureau of Materials and Physical Research for conformance to the contract specifications.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes policy memorandum 97-2 dated February 27, 2002

State of Illinois  
Department of Transportation  
Division of Aeronautics

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**POLICY MEMORANDUM**

January 1, 2004

Springfield, Illinois

Number: 2001-1

TO: CONTRACTORS

SUBJECT: REQUIREMENTS FOR COLD WEATHER CONCRETING

I. PURPOSE

- A. This policy memorandum outlines the minimum requirements for cold weather concreting. Cold weather is defined as whenever the average ambient air temperature during day or night drops below 40°F.

II. COLD WEATHER CONCRETING PLAN

- A. The contractor shall submit a cold weather concreting plan to the Engineer for approval. Cold weather concreting operations are not allowed to proceed until the contractor's cold weather concreting plan has been approved by the Engineer.
- B. The contractor's plan shall be in compliance with this memorandum and shall address, as a minimum, the following:
1. Concrete Mix Manufacturing
  2. Concrete Mix Temperature Monitoring
  3. Base Preparation
  4. Concrete Curing and Protection
  5. In Place Concrete Temperature Monitoring
  6. Strength Test Specimens

III. MINIMUM REQUIREMENTS

A. Concrete Mix Manufacturing

1. The contractor must make the necessary adjustments so that the concrete temperature is maintained from 50°F to 90°F for placement. Acceptable methods include:
  - a) Heating the mixing water Note: If the mixing water is to be heated to a temperature above 100°F, the contractor must include a mixing sequence plan to indicate the order that each component of the mix is to be charged into the mixer.

- b) Heating the aggregates Note: The exact method of heating the aggregates shall be included as part of the cold weather concreting plan. Aggregates must be free of ice and frozen lumps. To avoid the possibility of a quick or flash set of the concrete, when either the water or aggregates are heated to above 100°F, they should be combined in the mixer first before the cement is added.

#### B. Concrete Mix Temperature

1. The contractor shall monitor the mix temperature at the plant and prior to placement in the forms. Mix that does not meet the temperature requirement of 50°F to 90°F shall be rejected for use on the project.

#### C. Base Preparation

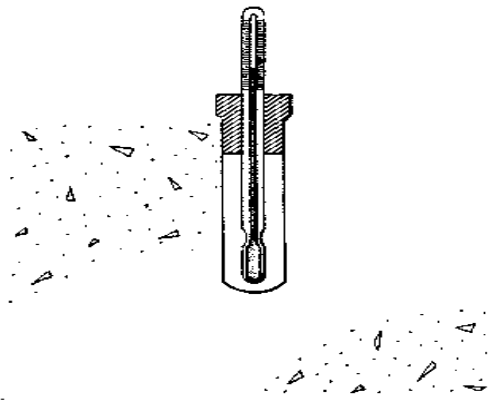
1. Paving or placing concrete on a frozen base, subbase, or subgrade is prohibited.
2. The base, subbase, or subgrade on which the concrete is to be placed shall be thawed and heated to at least 40°F. The method by which the base subbase or subgrade is to be heated shall be indicated in the contractor's cold weather concreting plan. Insulating blankets or heated enclosures may be required.

#### D. Concrete Protection and Curing

1. In addition to the curing options available in article 501-3.17 (a) (b), (c), and (d) of the Standard Specifications for Construction of Airports, the contractor shall protect the concrete in such a manner as to maintain a concrete temperature of at least 50°F for 10 days.
2. The method of concrete protection shall be by use of insulating layer or heated enclosure around the concrete. The method of protection shall be indicated in the contractor's cold weather concreting plan. When insulating layers are to be used, the thermal resistance to heat transfer (R Value in °F\*hr\*ft<sup>2</sup>/BTU) of the insulation material selected, shall be appropriate for the slab thickness being constructed and shall be indicated in the cold weather concreting plan.
3. Appendix A shows a chart and table taken from the American Concrete Institute specification, ACI 306 R Cold Weather Concreting, which may be used by the contractor in selecting the proper insulation (R Value) and insulating material which may be used.

#### E. In-Place Concrete Temperature Monitoring

1. Once the concrete is in place, the protection method used, must ensure that the concrete temperature does not fall below 50°F for the time period specified in Section (D. 1.) of this Policy Memorandum (10 days).
2. The concrete temperature on the surface and below the surface must be monitored and recorded by the contractor for the duration of the protection period in Section (D. 1.).
3. After the concrete has hardened, surface temperature can be checked with special surface thermometers or with an ordinary thermometer that is kept covered with insulating blankets. The high and low values for each 24-hour period of protection must be measured and recorded.
4. One acceptable method of checking temperature below the concrete surface is given in the Portland Cement Association (PCA) book entitled "Design and Control of Concrete Mixtures" latest edition. The method is indicated below and it should be noted that the thermometer should be capable of recording high and low values for a given 24-hour period.



5. The exact method for surface and sub-surface concrete temperature monitoring shall be indicated in the contractor's cold weather concreting plan. The maximum permissible difference between the interior and surface temperature is 35 °F. Adjustments in protection method shall be implemented if the maximum permissible difference is exceeded.

#### F. Strength specimen handling

1. The Contractor is responsible for making, transporting, and curing all samples (beams or cylinders)
2. The Contractor is required to load the testing machine and dispose of the broken pieces.
3. Onsite, indoor curing facilities, meeting the requirements of ASTM C-31, shall be required for cold weather concreting operations.

4. Sampling for strength specimens shall be according to the Contract Special Provisions. Sampled concrete shall be transported to the indoor curing facilities for the casting of strength specimens.
5. The exact location and description of the curing facilities shall be indicated in the contractor's cold weather concreting plan.
6. The method of transporting concrete sampled from the grade to the curing facilities for casting shall be indicated in the contractor's cold weather concreting plan.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 2001-1 dated January 1, 2001

# APPENDIX A

**Minimum exposure temperatures for concrete flatwork placed on the ground for concrete placed & surface temperature maintained at 50 F (10 C) for 3 days on ground at 35 F (2 C)**

Slab thickness, in. (m)	Minimum ambient air temperature, deg F (deg C) allowable when insulation having these values of thermal resistance R, hr-ft <sup>2</sup> -F/Btu (m <sup>2</sup> -K/W), is used			
	R = 2 (0.35)	R = 4 (0.70)	R = 6 (1.06)	R = 8 (1.41)
Cement content = 300 lb/yd <sup>2</sup> (178 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	*	*	*	*
18 (0.46)	42 (6)	38 (3)	32 (0)	26 (-3)
24 (0.61)	37 (3)	25 (-4)	11 (-12)	-3 (-19)
30 (0.76)	31 (-1)	15 (-9)	-1 (-18)	-17 (-27)
36 (0.91)	31 (-1)	12 (-11)	-5 (-21)	-22 (-30)
Cement content = 400 lb/yd <sup>2</sup> (237 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	46 (8)	44 (7)	42 (6)	40 (4)
18 (0.46)	36 (2)	22 (-6)	8 (-13)	-6 (-21)
24 (0.61)	28 (-2)	9 (-13)	-10 (-23)	-29 (-34)
30 (0.76)	21 (-6)	0 (-18)	-21 (-29)	-42 (-41)
36 (0.91)	21 (-6)	-4 (-20)	-29 (-34)	-50 (-46)
Cement content = 500 lb/yd <sup>2</sup> (296 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	42 (6)	36 (2)	30 (-1)	24 (-4)
18 (0.46)	30 (-1)	12 (-11)	-6 (-21)	-22 (-30)
24 (0.61)	21 (-6)	-5 (-21)	-31 (-35)	-50 (-46)
30 (0.76)	16 (-9)	-10 (-23)	-42 (-41)	-74 (-59)
36 (0.91)	16 (-9)	-18 (-28)	-50 (-46)	#
Cement content = 600 lb/yd <sup>2</sup> (356 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	38 (3)	26 (-3)	14 (-10)	2 (-17)
18 (0.46)	24 (-4)	0 (-18)	-24 (-31)	-48 (-44)
24 (0.61)	14 (-10)	-16 (-27)	-46 (-43)	-82 (-63)
30 (0.76)	10 (-12)	-20 (-29)	-62 (-52)	#
36 (0.91)	7 (-14)	-30 (-34)	#	#

\* > 50 F (10 C): additional heat required

# << -60 F (-51 C)

**Minimum exposure temperatures for concrete flatwork placed on the ground for concrete placed & surface temperature maintained at 50 F (10 C) for 7 days on ground at 35 F (2 C)**

Slab thickness, in. (m)	Minimum ambient air temperature, deg F (deg C) allowable when insulation having these values of thermal resistance R, hr-ft <sup>2</sup> -F/Btu (m <sup>2</sup> -K/W), is used			
	R = 2 (0.35)	R = 4 (0.70)	R = 6 (1.06)	R = 8 (1.41)
Cement content = 300 lb/yd <sup>2</sup> (178 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	*	*	*	*
18 (0.46)	46 (8)	42 (6)	36 (2)	30 (-1)
24 (0.61)	40 (4)	31 (-1)	22 (-6)	11 (-12)
30 (0.76)	35 (2)	22 (-6)	7 (-14)	-8 (-22)
36 (0.91)	31 (-1)	13 (-11)	-5 (-21)	-23 (-31)
Cement content = 400 lb/yd <sup>2</sup> (237 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	*	*	*	*
18 (0.46)	41 (5)	32 (0)	22 (-6)	12 (-11)
24 (0.61)	35 (2)	19 (-7)	-1 (-17)	-15 (-26)
30 (0.76)	28 (-2)	8 (-13)	-14 (-26)	-36 (-38)
36 (0.91)	23 (-5)	-4 (-20)	-29 (-34)	-54 (-48)
Cement content = 500 lb/yd <sup>2</sup> (296 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	48 (9)	44 (7)	40 (4)	36 (2)
18 (0.46)	36 (2)	22 (-6)	8 (-13)	-6 (-21)
24 (0.61)	28 (-2)	6 (-14)	-16 (-27)	-38 (-39)
30 (0.76)	22 (-6)	-7 (-22)	-36 (-38)	-64 (-53)
36 (0.91)	16 (-9)	-18 (-28)	-50 (-46)	#
Cement content = 600 lb/yd <sup>2</sup> (356 kg/m <sup>2</sup> )				
4 (0.10)	*	*	*	*
8 (0.20)	*	*	*	*
12 (0.31)	44 (7)	38 (3)	32 (0)	26 (-3)
18 (0.46)	31 (-1)	14 (-10)	-5 (-21)	-24 (-31)
24 (0.61)	22 (-6)	-5 (-21)	-32 (-36)	-61 (-52)
30 (0.76)	14 (-10)	-19 (-28)	-67 (-55)	#
36 (0.91)	7 (-14)	-30 (-34)	#	#

\* > 50 F (10 C): additional heat required

# < -60 F (-51 C)



## Thermal Resistance of Various Insulating Materials

Insulating Material	Thermal resistance "R" for these thicknesses of material*	
	1 in., hr-ft <sup>2</sup> -F / Btu	10 mm, m <sup>2</sup> -K / W
<b>Boards and slabs</b>		
Expanded polyurethane (R-11 exp.)	6.25	0.438
Expanded polystyrene extruded (R-11 exp.)	5	0.347
Expanded polystyrene extruded, plain	4	0.277
Glass fiber, organic bonded	4	0.277
Expanded polystyrene, molded beads	3.57	0.247
Mineral fiber with resin binder	3.45	0.239
Mineral fiber board, wet felted	2.94	0.204
Sheathing, regular density	2.63	0.182
Cellular glass	2.63	0.182
Laminated paperboard	2	0.139
Particle board (low density)	1.85	0.128
Plywood	1.25	0.087
<b>Blanket</b>		
Mineral fiber, fibrous form processed from rock, slag, or glass	3.23	0.224
<b>Loose fill</b>		
Wood fiber, soft woods	3.33	0.231
Mineral fiber (rock, slag, or glass)	2.5	0.173
Perlite (expanded)	2.7	0.187
Vermiculite (exfoliated)	2.2	0.152
Sawdust or shavings	2.22	0.154

\*Values from ASHRAE Handbook of Fundamentals, 1977,  
American Society of Heating, Refrigerating, and Air-  
Conditioning Engineers, New York.

State of Illinois  
Department of Transportation  
Division of Aeronautics

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**POLICY MEMORANDUM**

April 1, 2010

Springfield, Illinois

Number 2003-1

TO: CONTRACTORS

SUBJECT: REQUIREMENTS FOR LABORATORY, TESTING, QUALITY CONTROL, AND PAVING OF SUPERPAVE HMA CONCRETE MIXTURES FOR AIRPORTS

I. SCOPE

The purpose of this policy memorandum is to define to the Contractor the requirements concerning the laboratory, testing, Quality Control, and paving of HMA mixtures utilizing Superpave technology. References are made to the most recent issue of the Standard Specifications for Construction of Airports and to American Society for Testing and Materials (ASTM) testing methods. The Quality Assurance and acceptance responsibilities of the Resident Engineer are described in Policy Memorandum 96-3.

II. LABORATORY

The Contractor shall provide a laboratory located at the plant and approved by the Illinois Division of Aeronautics (IDA). The laboratory shall be of sufficient size and be furnished with the necessary equipment and supplies for adequately and safely performing the Contractor's Quality Control testing as well as the Resident Engineer's acceptance testing as described in Policy Memorandum 96-3.

The effective working area of the laboratory shall be a minimum of 600 square feet with a ceiling height of not less than 7.5 feet. Lighting shall be adequate to illuminate all working areas. It shall be equipped with heating and air conditioning units to maintain a temperature of 70° F ±5°F.

The laboratory shall have equipment that is in good working order and that meets the requirements set forth in the following ASTM test standards:

ASTM D 70	Test Method for Specific Gravity and Density of Semi-Solid Materials
ASTM C 117	Test Method for Materials Finer than 75 µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM C 566	Total Moisture Content of Aggregate by Drying
ASTM D 75	Sampling Aggregates
ASTM D 2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
IDOT	Ignition Method for Determining Asphalt Content
ASTM D 2726	Bulk Specific Gravity of Compacted Bituminous Mixtures using Saturated Surface Dry Specimens

ASTM D 3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D 2950	Density of Bituminous Concrete in Place by Nuclear Method
ASTM D 4125	Asphalt Content of Bituminous Mixtures by Nuclear Method
ASTM C 127	Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate
ASTM C 128	Standard Test Method for Specific Gravity and Absorption of Fine Aggregate

The Asphalt Institute's *Superpave Mix Design, Superpave Series No. 2 (SP-2)*

The laboratory and equipment furnished by the Contractor shall be properly calibrated and maintained. The Contractor shall maintain a record of calibration results at the laboratory. The Engineer may inspect measuring and testing devices at any time to confirm both calibration and condition. If the Resident Engineer determines that the equipment is not within the limits of dimensions or calibration described in the appropriate test method, he may stop production until corrective action is taken. If laboratory equipment becomes inoperable or insufficient to keep up with mix production testing, the Contractor shall cease mix production until adequate and/or sufficient equipment is provided.

### III. MIX DESIGN SUBMITTAL

Based upon data and test results submitted by the Contractor, the Illinois Division of Aeronautics Engineer of Construction & Materials shall issue the final Job Mix Formula (JMF) approval letter that concurs or rejects the Contractor's proposed JMF. The Contractor will be required to perform the sampling and laboratory testing and develop a complete mix design, according to the following guidelines: [Note: A testing summary chart can be found in Appendix B.]

- A. Material sources meeting the requirements of the contract shall be submitted in writing at or before the preconstruction conference (see BITUMINOUS WORKSHEET in Appendix A) in the following format:
  1. To: Steven J. Long, P.E., Acting Chief Engineer  
Attn: Michael F. Wilhelm, P.E., Engineer of Construction & Materials  
Division of Aeronautics  
One Langhorne Bond Drive  
Springfield, Illinois 62707
  2. Producer name and location of each aggregate
  3. Producer # for each aggregate (producers are assigned this number by IDOT Central Bureau of Materials)
  4. Material code for each aggregate
  5. Gradation and Quality designation for each aggregate (i.e. CA-11, etc.)
  6. Producer, producer #, and specific gravities of asphalt cement
  7. Performance Graded Binder 64-22 shall be used unless otherwise approved by the IDA Engineer of Construction & Materials.
- B. The Contractor shall obtain representative samples of each aggregate. The individual obtaining samples shall have successfully completed the IDOT Aggregate Technician Course under the

IDOT Division of Highways, QC/QA program. The sample size shall be approximately 280 lb. for each coarse aggregate, 150 lb. for each fine aggregate, 15 lb. for the mineral filler or collected dust, and 1 gallon of asphalt cement.

- C. The Contractor shall split the aggregate samples down and run gradation tests according to the testing methods referenced in Appendix B of this memorandum. The remaining aggregates shall be set aside for further Mix Design testing. The results of the gradation tests, along with the most recent stockpile gradations, shall be reported by fax to the IDA Engineer of Construction & Materials for engineering evaluation. If the gradation results are deemed non-representative or in any way unacceptable, new representative samples may be required at the direction of the IDA Engineer of Construction & Materials. Only composite gradations are required under this procedure.
- D. Based on the accepted gradation results, the Contractor will determine blend percentages in accordance with the contract specifications (see Section 401/403 – 3.2 JOB MIX FORMULA under Table 2) for each aggregate to be used in determining the Job Mix Formula, as well as mix temperature and asphalt content(s), and number of Gyration ( $N_{des}$ ) for preparation of the Superpave Mix Design. The Contractor will verify the aggregate percentages, mix temperatures, asphalt content(s), and number of gyrations with the IDA Engineer of Construction & Materials before beginning any testing.
- E. After verification of the information from step D., the Contractor shall make specimens and perform the following tests at various asphalt contents in order to obtain the optimum mix design. [Note: Actual test designation is referenced in Appendix B of this memorandum.]

**Tests**

Maximum Specific Gravity --  $G_{mm}$

Bulk Specific Gravity --  $G_{mb}$

% air voids --  $V_a$

% VMA

VFA %

The JMF will be designed in accordance with TABLE 2 as modified in Section 401 – 3.2 or 403 – 3.2, depending on the type of mix being produced. Appendix C contains a copy of the TABLE 2 targets and ranges for the JMF.

- F. All technicians who will be performing mix design testing and plant sampling/testing shall have successfully completed the IDOT Division of Highways Bituminous Concrete Level 1 Technician Course “Bituminous Concrete Testing”. The Contractor may also provide a Gradation who has successfully completed the Department’s “Gradation Technician Course” to run gradation tests only under the supervision of a Bituminous Concrete Level 2 Technician.
- G. The mix design testing results and resulting optimal JMF shall be reported to the IDA Engineer of Construction & Materials with the following data included:
  - a) Aggregate & liquid asphalt material codes
  - b) Aggregate & liquid asphalt producer numbers, names, and locations
  - c) Aggregate Blend of each aggregate
  - d) Optimum Blend % for each sieve
  - e) AC Specific Gravity
  - f) Bulk Specific Gravity and Absorption for each aggregate
  - g) Summary of Superpave Design Data: AC % Mix,  $G_{mb}$ ,  $G_{mm}$ , VMA, Voids (Total Mix), Voids Filled,  $V_{be}$ ,  $P_{be}$ ,  $P_{ba}$ ,  $G_{se}$
  - h) Optimum design data listing: AC % Mix,  $G_{mb}$ ,  $G_{mm}$ , VMA, Voids (Total Mix), Voids Filled,  $G_{se}$ ,  $G_{sb}$
  - i) Percent of asphalt that any RAP will add to the mix

j) Graphs for the following: gradation on 0.45 Power Curve, AC vs. Voids (Total Mix), AC vs. Specific Gravities, AC vs. Voids Filled, AC vs. VMA

- H. The IDA Engineer of Construction & Materials shall generate and issue a concurrence or rejection of the Contractor's proposed Mix Design with the JMF for the manufacture of HMA mixtures based upon the Contractor's submitted testing and completed mix design results. The Contractor shall not be permitted to use the proposed HMA mix in production for the project until an approval letter is issued to the Contractor by the IDA Engineer of Construction & Materials, and the mix passes all test section requirements, when a test section is specified.
- I. The above procedure, III. MIX DESIGN SUBMITTAL, shall be repeated for each change in source or gradation of materials.

#### IV. MIX PRODUCTION TESTING

The Quality Control of the manufacture and placement of HMA mixtures is the responsibility of the Contractor. The Contractor shall perform or have performed the inspection and tests required to assure conformance to contract requirements. Quality Control includes the recognition of defects and their immediate correction. This may require increased testing, communication of test results to the plant or the job site, modification of operations, suspension of HMA production, rejection of material, or other actions as appropriate. The Resident Engineer shall be immediately notified of any failing tests and subsequent remedial action. Form AER M-14 shall be reported to the Engineer and Resident Engineer no later than the start of the next work day. In addition, AER M-9 and M-11 shall be given to the Resident Engineer daily. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for Quality Control. This individual shall have successfully completed the IDOT Division of Highways HMA Concrete Level II Technician Course "HMA Proportioning and Mixture Evaluation." In addition to the QC Manager, the Contractor shall provide sufficient and qualified personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. The following plant tests and documentation shall be required: [Note: A summary chart of testing can be found in Appendix B.]

- A. Minimum of one (1) complete hot bin or combined belt analysis per day of production or every 1,000 tons, whichever is more frequent.
- B. Minimum one (1) stockpile gradation for each aggregate and/or mineral filler per week when a batch plant is utilized. Minimum of one (1) gradation for each aggregate per day of production or every 1,000 tons when a drum plant is used, and one (1) gradation per week for mineral filler when a drum plant is used.
- C. A certification from the quarry for the total quantity of aggregate listing the source, gradation type, and quality designation of aggregate shipped. In lieu of a certification, the contractor may complete and submit an "Aggregate Certification of Compliance" form which may be obtained from IDA or found on the I.D.O.T. website.
- D. Original asphalt shipping tickets listing the source and type of asphalt shipped.

- E. One mix sample per 1,000 tons of mix. The sample shall be split in half. One half shall be reserved for testing by the Engineer. The other half shall be split and tested by the Contractor for Extraction, Gradation, Maximum Specific Gravity, and Air Void tests in accordance with the appropriate ASTM standard referenced herein. [See Appendix B.]
1. In place of the extraction test, the Contractor may provide the asphalt content by a calibrated ignition oven test using the IDOT Division of Highways' latest procedure. The correction (calibration) factor for aggregate type shall be clearly indicated in the reported test results.

From these tests, the Contractor shall interpret the test data and make necessary adjustments to the production process only in order to comply with the approved JMF.

## V. QUALITY CONTROL

### A. Control Limits

Target values shall be determined from the approved JMF. The target values shall be plotted on the control charts within the following control limits:

<u>Parameter</u>	<u>Control Limits</u>	
	<u>Individual Test</u>	<u>Moving Avg. of 4</u>
% Passing		
1/2 in.	± 7 %	±4 %
No. 4	±7 %	±4 %
No. 8	±5 %	±3 %
No. 30	±4 %	±2.5 %
No. 200 *	±2.0 % *	±1.0 % *
Asphalt Content	±0.45 %	±0.2 %

\* No. 200 material percents shall be based on washed samples. Dry sieve gradations (-200) shall be adjusted based on anticipated degradation in the mixing process.

### B. Control Charts

Standardized control charts shall be maintained by the Contractor at the field laboratory. The control charts shall be displayed and be accessible at the field laboratory at all times for review by the Engineer. The individual required test results obtained by the Contractor shall be recorded on the control chart immediately upon completion of a test, but no later than 24 hours after sampling. Only the required plant tests and resamples shall be recorded on the control chart. Any additional testing of check samples may be used for controlling the Contractor's processes, but shall be documented in the plant diary.

The results of assurance tests performed by the Resident Engineer will be posted as soon as available.

The following parameters shall be recorded on control charts:

1. Combined Gradation of Hot-Bin (Batch Plant) or Combined Belt Aggregate Samples (Drier Drum Plant). (% Passing 1/2 in., No. 4., No. 8, No. 30, and No. 200 Sieves)
2. Asphalt Content

3. Bulk Specific Gravity ( $G_{mb}$ )
4. Maximum Specific Gravity of Mixture ( $G_{mm}$ )

C. Corrective Action for Required Plant Tests

Control Limits for each required parameter, both individual tests and the average of four tests, shall be exhibited on control charts. Test results shall be posted within the time limits previously outlined.

1. Individual Test Result. When an individual test result exceeds its control limit, the Contractor shall immediately resample and retest. If at the end of the day no material remains from which to resample, the first sample taken the following day shall serve as the resample as well as the first sample of the day. This result shall be recorded as a retest. If the retest passes, the Contractor may continue the required plant test frequency. Additional check samples should be taken to verify mix compliance.
2. Asphalt Content. If the retest for asphalt content exceeds control limits, mix production shall cease and immediate corrective action shall be instituted by the Contractor. After corrective action, mix production shall be restarted, the mix production shall be stabilized, and the Contractor shall immediately resample and retest. Mix production may continue when approved by the Engineer. The corrective action shall be documented.

Inability to control mix production is cause for the Engineer to stop the operation until the Contractor completes the investigation identifying the problems causing failing test results.

3. Combined Aggregate/Hot-Bin. For combined aggregate/hot-bin retest failures, immediate corrective action shall be instituted by the Contractor. After corrective action, the Contractor shall immediately resample and retest. The corrective action shall be documented.
  - a. Moving Average. When the moving average values trend toward the moving average control limits, the Contractor shall take corrective action and increase the sampling and testing frequency. The corrective action shall be documented.

The Contractor shall notify the Engineer whenever the moving average values exceed the moving average control limits. If two consecutive moving average values fall outside the moving average control limits, the Contractor shall cease operations. Corrective action shall be immediately instituted by the Contractor. Operations shall not be reinstated without the approval of the Engineer. Failure to cease operations shall subject all subsequently produced material to be considered unacceptable.
  - b. Mix Production Control. If the Contractor is not controlling the production process and is making no effort to take corrective action, the operation shall stop.

## VI. TEST SECTION AND DENSITY ACCEPTANCE (Note: Applies only when specified.)

- A. The purpose of the test section is to determine if the mix is acceptable and can be compacted to a consistent passing density.

A quick way to determine the compactibility of the mix is by the use of a nuclear density gauge in the construction of a growth curve. An easy way to construct a growth curve is to use a good vibratory roller. To construct the curve, an area the width of the roller in the middle of the mat is chosen and the roller is allowed to make one compactive pass. With the roller stopped some 30 feet away, a nuclear reading is taken and the outline of the gauge is marked on the pavement. The roller then makes a compactive pass in the opposite direction and another reading is taken. This scenario is continued until at least two (2) passes are made past the maximum peak density obtained.

The maximum laboratory density potential of a given mix is a direct function of the mix design air voids. Whereas, the actual maximum field density is a function of the type of coarse aggregates, natural or manufactured sands, lift thickness, roller type (static or vibratory), roller and paver speed, base condition, mix variation, etc. All of these items are taken into consideration with the growth curve.

1. High Density in the Growth Curve. If the growth curve indicates a maximum achievable field density of between 95 to 98 percent of the Theoretical Maximum Density (D), you can proceed with the Rolling Pattern. On the other hand, if the maximum achievable density is greater than 98 percent, a quick evaluation (by use of an extractor, hot bin gradations, nuclear asphalt determinator, etc.) must be made of the mix. When adjustments are made in the mix, a new growth curve shall be constructed.
2. Low Density in the Growth Curve. If the growth curve indicates the maximum achievable density is below 94 percent, a thorough evaluation of the mix, rollers, and laydown operations should be made. After a thorough evaluation of all factors (mix, rollers, etc.), asphalt or gradation changes may be in order as directed by the Engineer. Again, any changes in the mix will require a new growth curve. Note that the nuclear density test is a quality control tool and not an acceptance test. All acceptance testing is to be conducted by the use of cores, unless otherwise specified.
3. Acceptance of Test Section. The Contractor may proceed with paving the day after the test section provided the following criteria have been met:
  - a. Four random locations (2 cores per location cut longitudinally and cored by the Contractor) will be selected by the Engineer within the test strip. All the cores must show a minimum of 94% density.
  - b. All Superpave and extraction test results from mix produced for the test section must be within the tolerances required by specification.
  - c. The Contractor shall correlate his nuclear gauge to the cores taken in the test section. Additional cores may be taken at the Contractor's expense for this purpose within the test section area, when approved by the Engineer.



4. Density Acceptance under Production Paving. The responsibility for obtaining the specified density lies with the Contractor. Therefore, it is important that the nuclear density gauge operator communicate with the roller operators to maintain the specified density requirements. The Contractor shall provide a qualified HMA Density Tester who has successfully completed the Department's "HMA Nuclear Density Testing Course" to run all required density tests on the job site. Density acceptance testing, unless otherwise specified, is described as follows:
- a. The Contractor shall cut cores at random locations within 500 ton sublots as directed by the Resident Engineer.
  - b. The cores should be extracted so as not to damage them, since they are used to calculate the Contractor's pay.
  - c. The Engineer will run preliminary  $G_{mb}$  tests on the cores to give the Contractor an indication of how compaction is running for the next day's paving.
  - d. A running average of four (4) Maximum Theoretical Gravities ( $G_{mm}$ ) will be used for calculating percent compaction.
  - e. Final core density tests and pay calculations will be performed by the Resident Engineer and delivered to the Contractor.
  - f. Should the contractor wish to resample the pavement as a result of pay calculations resulting in less than 100% payment, the request must be made within 48 hours of receipt of the original payment calculations.

Steven J. Long, P.E.  
Acting Chief Engineer

Supersedes Policy Memorandum 2003-1 dated January 15, 2007

# **APPENDIX A**

# BITUMINOUS WORKSHEET

Airport: \_\_\_\_\_ Project No.: \_\_\_\_\_ AIP No.: \_\_\_\_\_

Mix Design #: \_\_\_\_\_ Material Code: \_\_\_\_\_ Producer: \_\_\_\_\_

Prod. #: \_\_\_\_\_

## AGGREGATE

Mat'l. Code: \_\_\_\_\_

Producer #: \_\_\_\_\_

Prod. Name \_\_\_\_\_

Location: \_\_\_\_\_

## Percent Passing

### Sieve Size

1 inch \_\_\_\_\_

3/4 inch \_\_\_\_\_

1/2 inch \_\_\_\_\_

3/8 inch \_\_\_\_\_

No. 4 \_\_\_\_\_

No. 8 \_\_\_\_\_

No. 16 \_\_\_\_\_

No. 30 \_\_\_\_\_

No. 50 \_\_\_\_\_

No. 100 \_\_\_\_\_

No. 200 \_\_\_\_\_

Washed (y/n) \_\_\_\_\_

O.D. Gravity \_\_\_\_\_

App. Gravity \_\_\_\_\_

Absorption \_\_\_\_\_

Asphalt Gravity \_\_\_\_\_ Asphalt Source \_\_\_\_\_ Asphalt Producer No. \_\_\_\_\_

## MARSHALL DATA

% Asphalt \_\_\_\_\_

M. Stability \_\_\_\_\_

Flow \_\_\_\_\_

D \_\_\_\_\_

0 \_\_\_\_\_

% Air Voids \_\_\_\_\_

Q.C. Manager Name: \_\_\_\_\_ Phone number: \_\_\_\_\_

Laboratory Location: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Remarks: \_\_\_\_\_

# APPENDIX B

**QUALITY CONTROL TESTING (PLANT)**

<b>PARAMETER</b>	<b>FREQUENCY</b>	<b>SAMPLE SIZE</b>	<b>TEST METHOD</b>	<b>REPORT FORM</b>
Aggregate Gradations: Hot bins for batch and continuous plants--- Individual cold-feeds or combined belt-feeds for drier drum plants.	Minimum 1 per day of production and at least 1 per 1000 tons.	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm 1 gallon asphalt cement	ASTM C 136	AER M-9
Aggregate gradations: Stockpiles	Minimum 1 per aggregate per week per stockpile.	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm *Note: The above test sample sizes are to be obtained from splitting down a larger sample from the stockpiles.	ASTM C 136	AER M-9
Maximum Specific Gravity	Minimum 1 per 1000 tons	1200 gm per test	ASTM D 2041	AER M-11 and AERM-14
Bulk Specific Gravity	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 2726	AER M-11 and AERM-14
Marshall Stability and Flow	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 1559	AER M-11 and AERM-14
% Air Voids	Minimum 1 per 1000 tons		ASTM D 3203	AER M-11 and AERM-14
Extraction	Minimum 1 per 1000 tons	1000 gm (surface) 1500 gm (base)	ASTM D 2172	AER M-11 and AERM-14
Ignition Oven Test	Minimum 1 per 1000 tons	1500 gm		AER M-14
Nuclear Asphalt Gauge	Minimum 1 per 1000 tons	1000-1100 gm	ASTM D 2145	AER M-14
Gyratory Brix	Minimum 1 per 1000 tons	4700-4800 gm 115 mm +/- 5 mm	AASHTO TP4-99	

### MIX DESIGN TESTING

<b>PARAMETER</b>	<b>FREQUENCY</b>	<b>SAMPLE SIZE</b>	<b>TEST METHOD</b>	<b>REPORT FORM</b>
Representative samples of each aggregate and asphalt cement.	1 per aggregate and 1 asphalt cement.	280 lb. (coarse) 150 lb. (fine) 15 lb. (min. filler) 1 gallon asphalt cement	ASTM D 75	N/A
Aggregate Gradation	1 per aggregate	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm	ASTM C 136	Bituminous Worksheet (Appendix A)
Maximum Specific Gravity	2 per specified asphalt content	1200 gm per test	ASTM D 2041	Bituminous Worksheet (Appendix A)
Bulk Specific Gravity	3 briquettes per specified asphalt content	1250 gm per briquette	ASTM D 2726	Bituminous Worksheet (Appendix A)
Marshall Stability and Flow	3 briquettes	1250 gm per briquette	ASTM D 1559	Bituminous Worksheet (Appendix A)
% Air Voids	1 per specified asphalt content (Avg. of $G_{sb}/G_{mm}$ )		ASTM D 3203	Bituminous Worksheet (Appendix A)
Gyratory Brix	Minimum 1 per 1000 tons	4700-4800 gm 115 mm +/- 5 mm	AASHTO TP4-99	

**QUALITY CONTROL TESTING (PAVER)**

<b>PARAMETER</b>	<b>FREQUENCY</b>	<b>SAMPLE SIZE</b>	<b>TEST METHOD</b>	<b>REPORT FORM</b>
Nuclear Density Test	As required by the Contractor to maintain consistent passing density	Various locations	ASTM D 2950	

# **APPENDIX C**



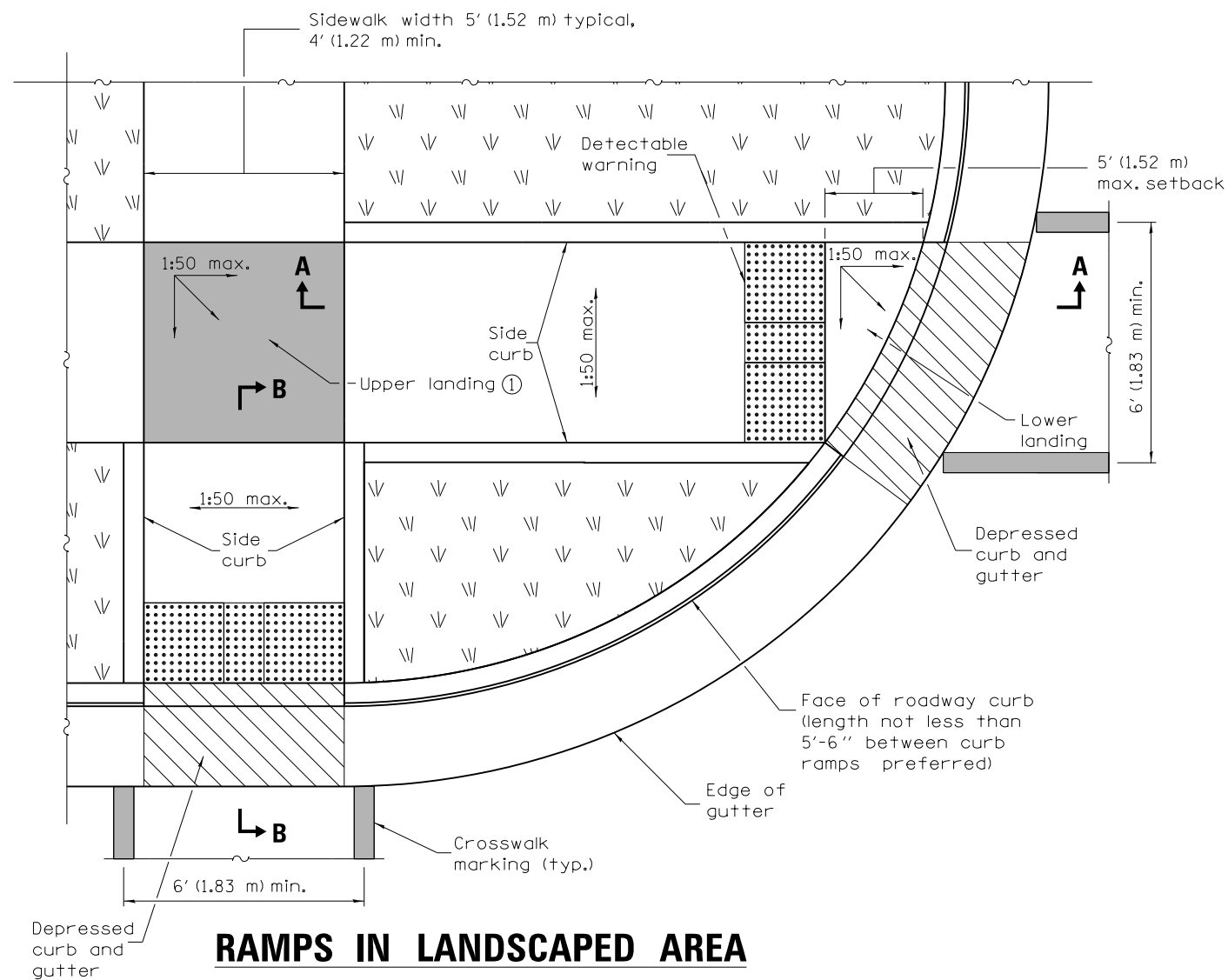
**AGGREGATE BITUMINOUS BASE COURSE**

<b>Percentage by Weight Passing Sieves Job Mix Formula (JMF)</b>		
<b>Sieve Size</b>	<b>Gradation B Range 1" Maximum</b>	<b>Ideal Target</b>
1-1/4 in.	---	---
1 in.	100	100
3/4 in.	93 – 97	95
1/2 in.	75 – 79	77
3/8 in.	64 – 68	66
No. 4	45 – 51	48
No. 8	34 – 40	37
No. 16	27 – 33	30
No. 30	19 – 23	21
No. 100	6 – 10	8
No. 200	4 – 6	5
<b>Bitumen %:</b>		
<b>Stone</b>	<b>4.5 – 7.0</b>	<b>5.5</b>

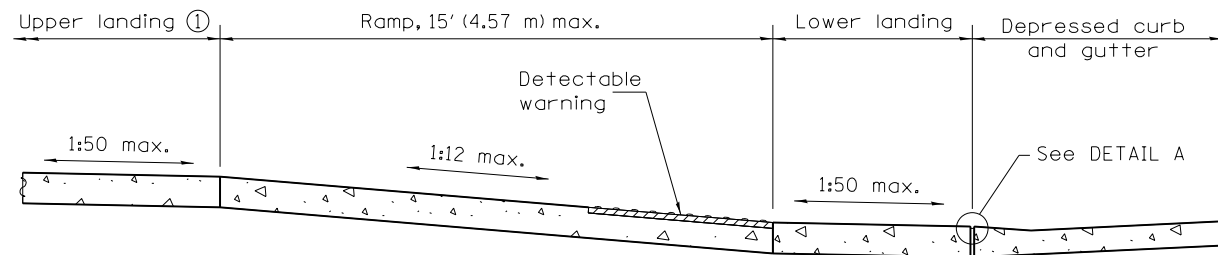
**AGGREGATE BITUMINOUS SURFACE COURSE**

<b>Percentage by Weight Passing Sieves Job Mix Formula (JMF)</b>		
<b>Sieve Size</b>	<b>Gradation B Range <sup>3/4</sup>" Maximum</b>	<b>Ideal Target</b>
1 in.	100	---
3/4 in.	100	100
1/2 in.	99 - 100	100
3/8 in.	91 - 97	94
No. 4	56 – 62	59
No. 8	36 - 42	39
No. 16	27 - 32	30
No. 30	19 - 25	22
No. 100	7 – 9	8
No. 200	5 – 7	6
<b>Bitumen %:</b>		
<b>Stone</b>	<b>5.0 – 7.0</b>	<b>6.0</b>

**IDOT STANDARD DRAWINGS**

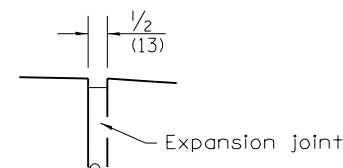


**RAMPS IN LANDSCAPED AREA  
SETBACK ≤ 5'**

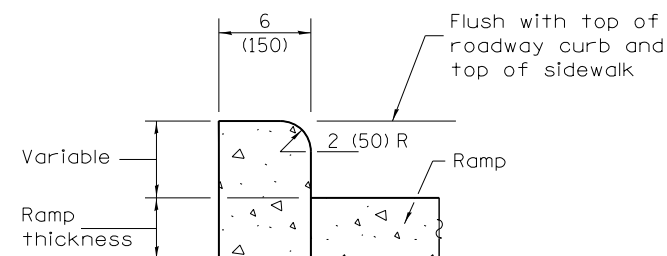


**SECTION A-A**

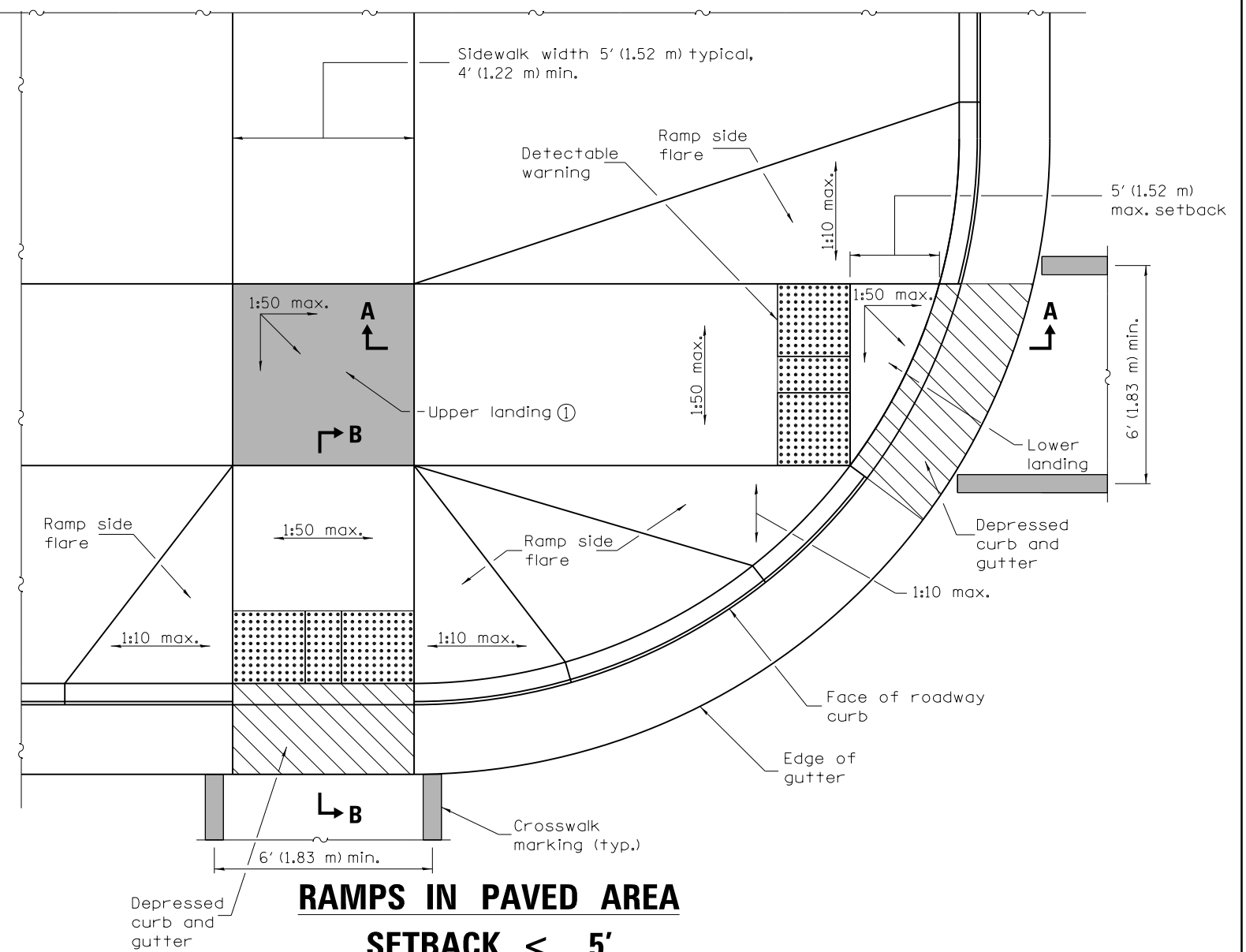
① Upper landing not required for ramp slopes flatter than 1:20.



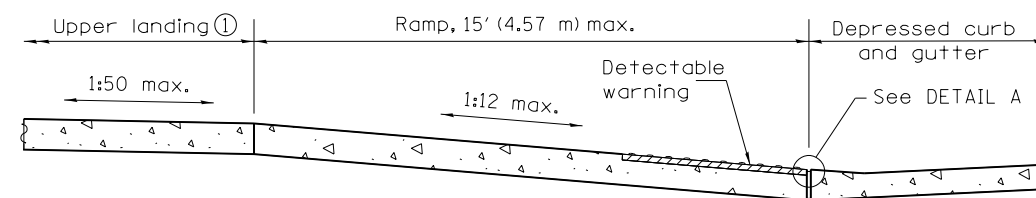
**DETAIL A**



**SIDE CURB DETAIL**



**RAMPS IN PAVED AREA  
SETBACK ≤ 5'**



**SECTION B-B**

① Upper landing not required for ramp slopes flatter than 1:20.

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-12	Completely revised and renamed standard.
1-1-08	Switched units to English (metric).

**PERPENDICULAR CURB RAMPS  
FOR SIDEWALKS**

(Sheet 1 of 2)

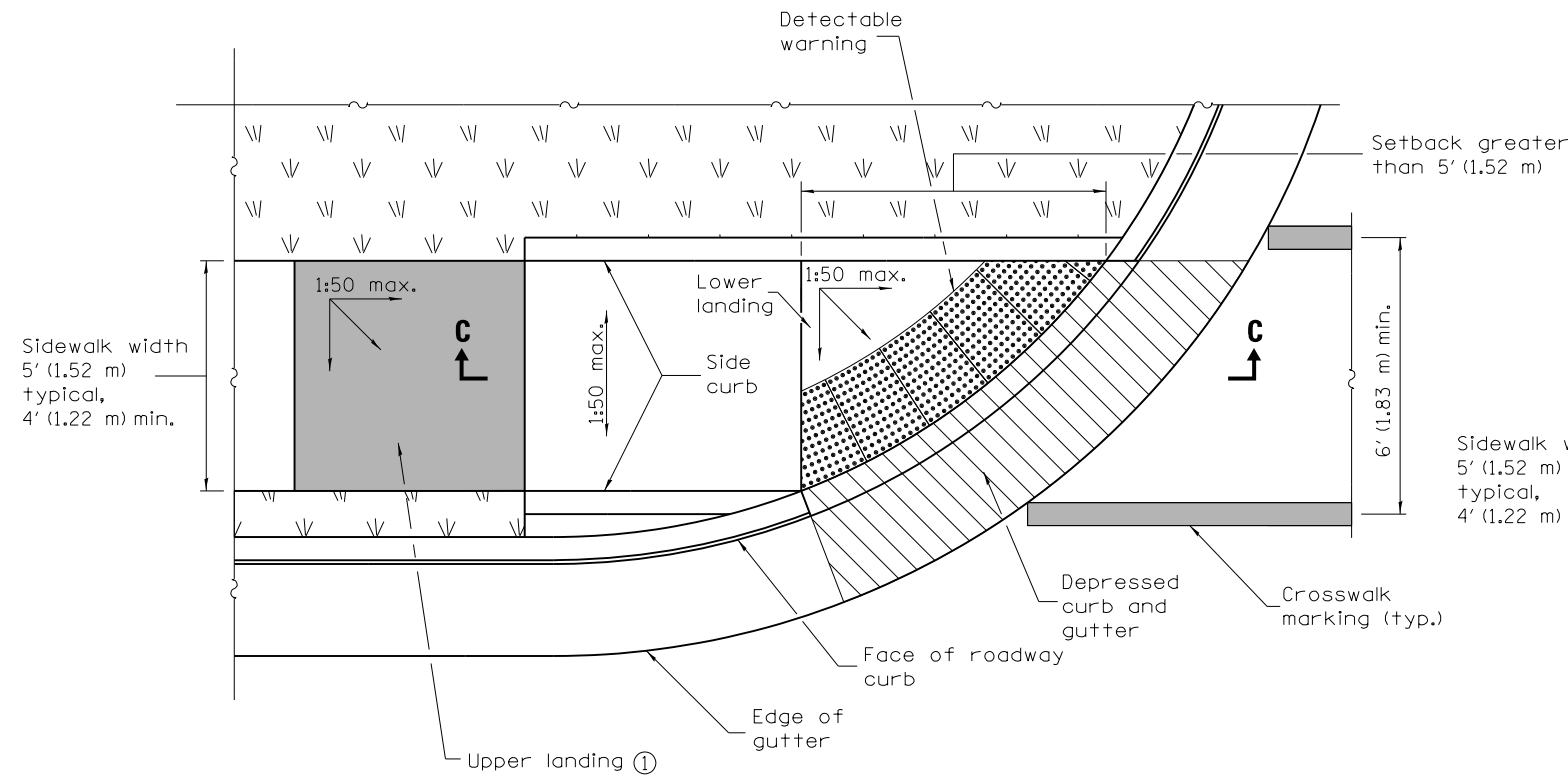
**STANDARD 424001-06**

Illinois Department of Transportation

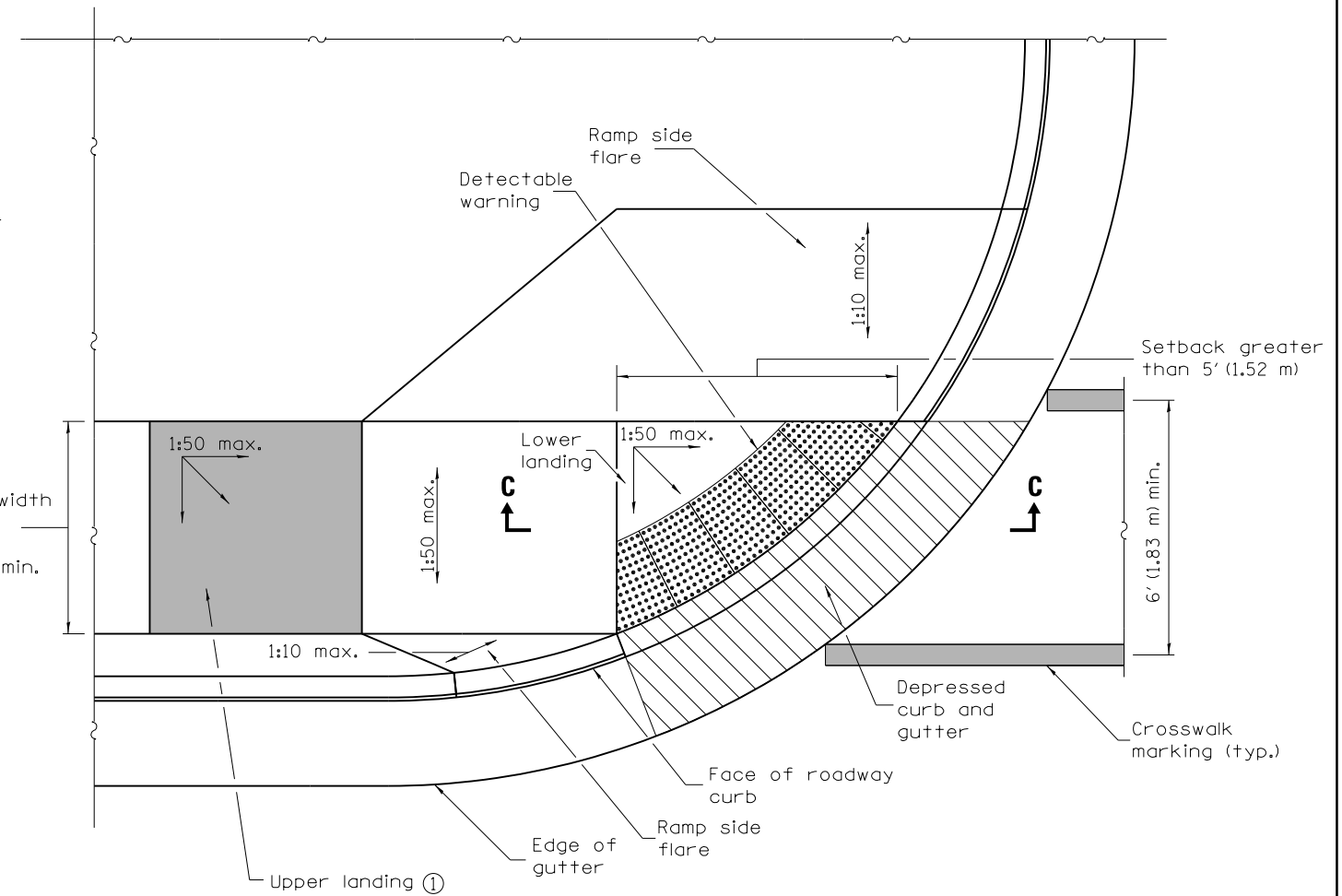
PASSED January 1, 2012  
*Michael Beard*  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2012  
*Scott Esch*  
 ENGINEER OF DESIGN AND ENVIRONMENT

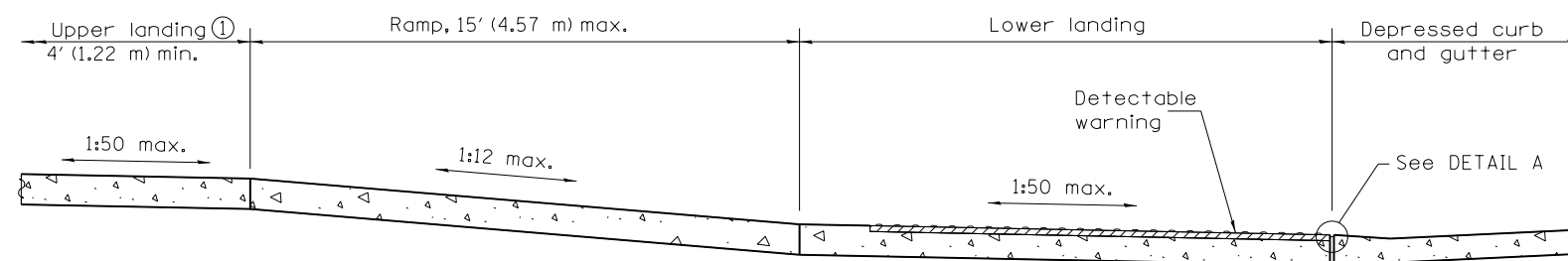
ISSUED 1-1-97



**RAMP IN LANDSCAPED AREA  
SETBACK > 5'**



**RAMP IN PAVED AREA  
SETBACK > 5'**



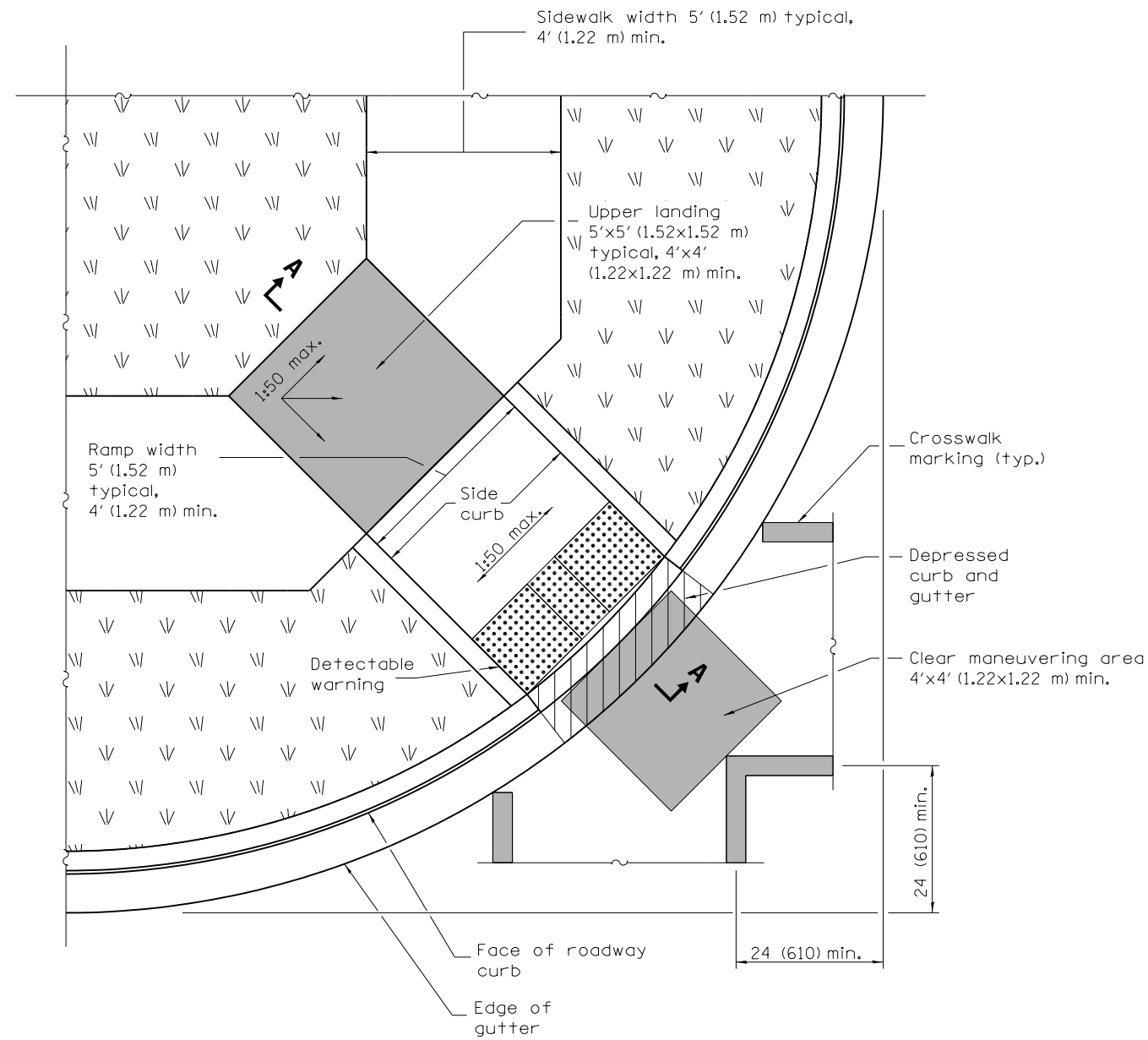
**SECTION C-C**

① Upper landing not required for ramp slopes flatter than 1:20.

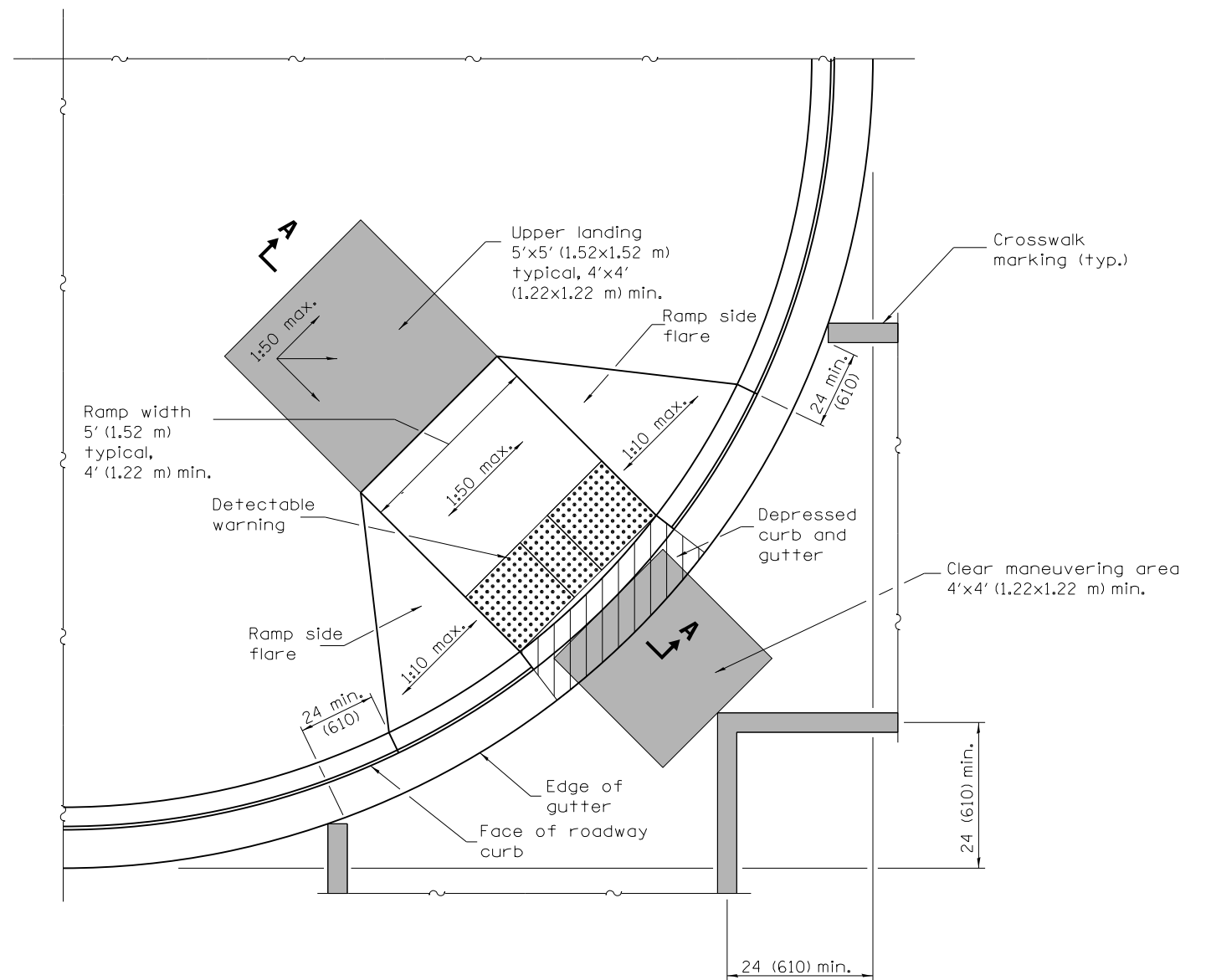
Illinois Department of Transportation  
 PASSED January 1, 2012  
 Michael Beard  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2012  
 Scott Esch  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

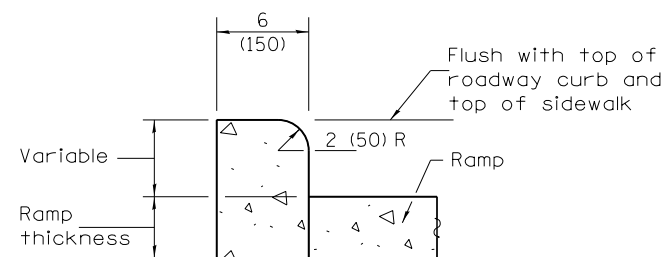
**PERPENDICULAR CURB RAMPS  
FOR SIDEWALKS**  
 (Sheet 2 of 2)  
**STANDARD 424001-06**



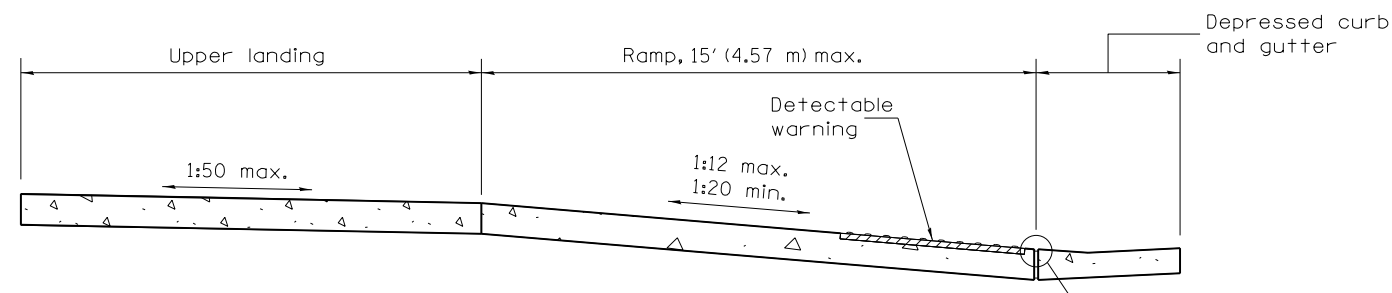
**RAMP IN LANDSCAPED AREA**



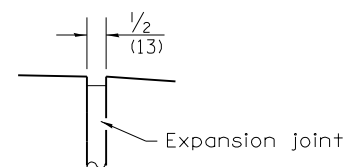
**RAMP IN PAVED AREA**



**SIDE CURB DETAIL**



**SECTION A-A**



**DETAIL A**

**GENERAL NOTES**

This Standard shall only be used for curb radii of 20 ft. (6.1 m) or greater.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-12	New standard.

**DIAGONAL CURB RAMPS FOR SIDEWALKS**

**STANDARD 424006**

Illinois Department of Transportation

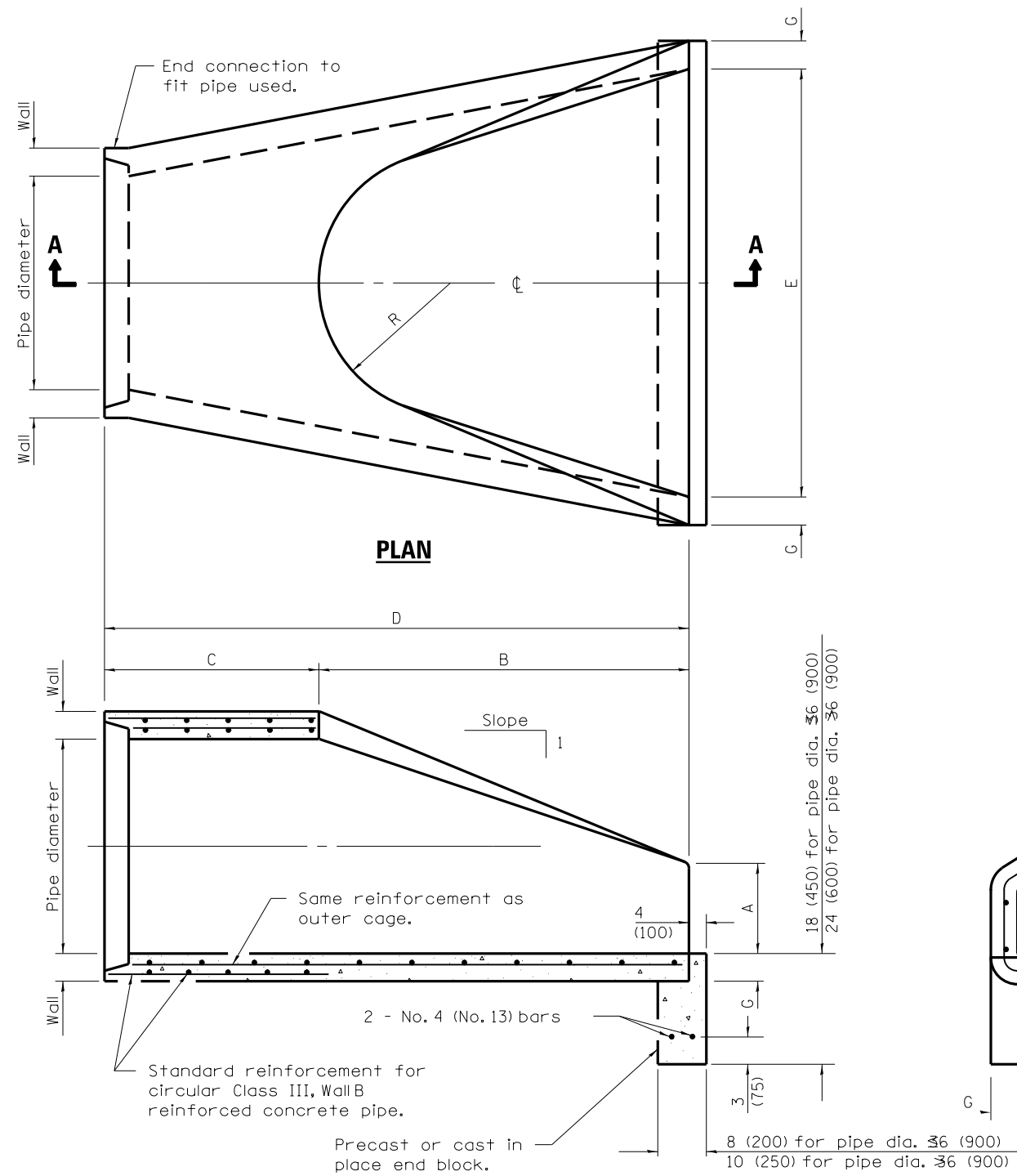
PASSED January 1, 2012

Michael Beard  
ENGINEER OF POLICY AND PROCEDURES

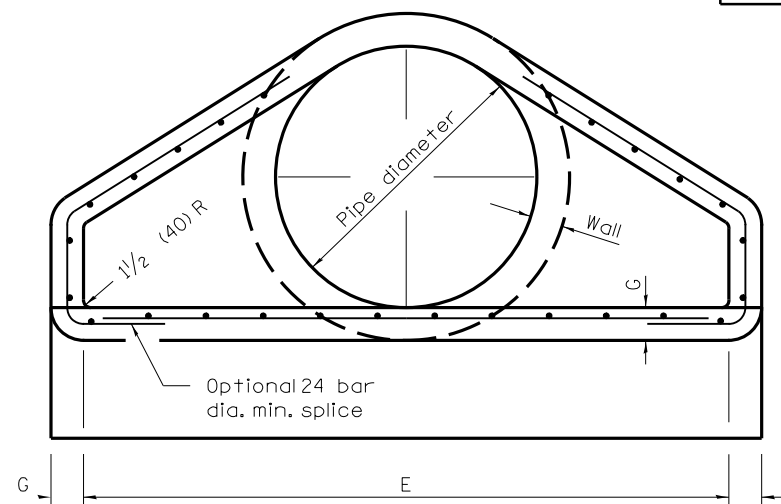
APPROVED January 1, 2012

Scott Esch  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12



**SECTION A-A**



**END VIEW**

PIPE DIA.	APPROX. QTY. lbs. (kg)	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
12 (300)	530 (240)	2 (51)	4 (102)	24 (610)	4'-0 7/8" (1.241 m)	6'-0 7/8" (1.851 m)	24 (610)	2 (51)	9 (229)	1:2.4
15 (375)	740 (335)	2 1/4 (57)	6 (152)	27 (686)	3'-10" (1.168 m)	6'-1" (1.854 m)	30 (762)	2 1/4 (57)	11 (280)	1:2.4
18 (450)	990 (450)	2 1/2 (64)	9 (229)	27 (686)	3'-10" (1.168 m)	6'-1" (1.854 m)	36 (914)	2 1/2 (64)	12 (305)	1:2.4
21 (525)	1280 (580)	2 3/4 (70)	9 (229)	35 (889)	38 (965)	6'-1" (1.854 m)	3'-6" (1.067 m)	2 3/4 (70)	13 (330)	1:2.4
24 (600)	1520 (690)	3 (76)	9 1/2 (241)	3'-7 1/2" (1.105 m)	30 (762)	6'-1 1/2" (1.867 m)	4'-0" (1.219 m)	3 (76)	14 (356)	1:2.5
27 (675)	1930 (875)	3 1/4 (83)	10 1/2 (267)	4'-0" (1.219 m)	25 1/2 (648)	6'-1 1/2" (1.867 m)	4'-6" (1.372 m)	3 1/4 (83)	14 1/2 (368)	1:2.4
30 (750)	2190 (995)	3 1/2 (89)	12 (305)	4'-6" (1.375 m)	19 3/4 (502)	6'-1 3/4" (1.874 m)	5'-0" (1.524 m)	3 1/2 (89)	15 (381)	1:2.5
33 (825)	3200 (1450)	3 3/4 (95)	13 1/2 (343)	4'-10 1/2" (1.486 m)	39 1/4 (997)	8'-1 3/4" (2.483 m)	5'-6" (1.676 m)	3 3/4 (95)	17 1/2 (445)	1:2.5
36 (900)	4100 (1860)	4 (102)	15 (381)	5'-3" (1.6 m)	34 3/4 (883)	8'-1 3/4" (2.483 m)	6'-0" (1.829 m)	4 (102)	20 (508)	1:2.5
42 (1050)	5380 (2440)	4 1/2 (114)	21 (533)	5'-3" (1.6 m)	35 (889)	8'-2" (2.489 m)	6'-6" (1.981 m)	4 1/2 (114)	22 (559)	1:2.5
48 (1200)	6550 (2970)	5 (127)	24 (610)	6'-0" (1.829 m)	26 (660)	8'-2" (2.489 m)	7'-0" (2.134 m)	5 (127)	22 (559)	1:2.5
54 (1350)	8240 (3740)	5 1/2 (140)	27 (686)	5'-5" (1.651 m)	35 (889)	8'-4" (2.54 m)	7'-6" (2.286 m)	5 1/2 (140)	24 (610)	1:2.0
60 (1500)	8730 (3960)	6 (152)	35 (889)	5'-0" (1.524 m)	39 (991)	8'-3" (2.515 m)	8'-0" (2.438 m)	5 (127)	*	1:1.9
66 (1650)	10710 (4860)	6 1/2 (165)	30 (762)	6'-0" (1.829 m)	27 (686)	8'-3" (2.515 m)	8'-6" (2.591 m)	5 1/2 (140)	*	1:1.7
72 (1800)	12520 (5680)	7 (178)	36 (914)	6'-6" (1.981 m)	21 (533)	8'-3" (2.514 m)	9'-0" (2.743 m)	6 (152)	*	1:1.8
78 (1950)	14770 (6700)	7 1/2 (191)	36 (914)	7'-6" (2.286 m)	21 (533)	9'-3" (2.819 m)	9'-6" (2.896 m)	6 1/2 (165)	*	1:1.8
84 (2100)	18160 (8240)	8 (203)	36 (914)	7'-6 1/2" (2.299 m)	21 (533)	9'-3 1/2" (2.832 m)	10'-0" (3.048 m)	6 1/2 (165)	*	1:1.6

\* Radius as furnished by manufacturer

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-11	Clarified ref. to pipe dia. on Section A-A. Changed 'inner' to 'outer' cage ref.
1-1-09	Switched units to English (metric).

**PRECAST REINFORCED CONCRETE FLARED END SECTION**

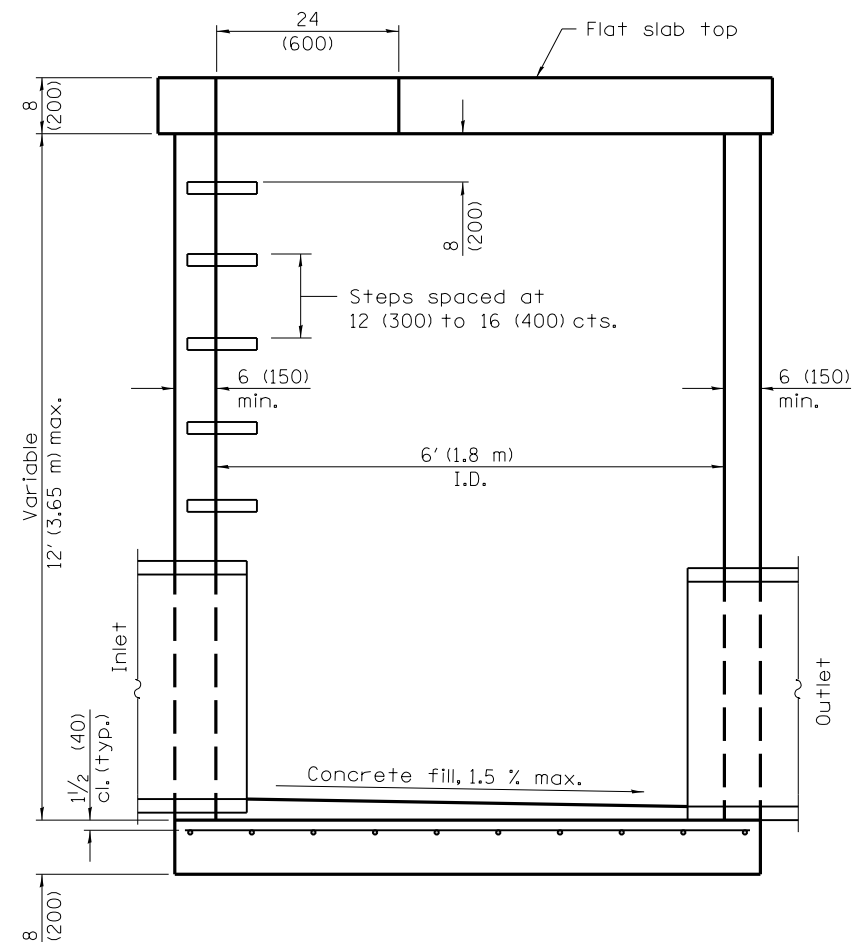
**STANDARD 542301-03**

Illinois Department of Transportation

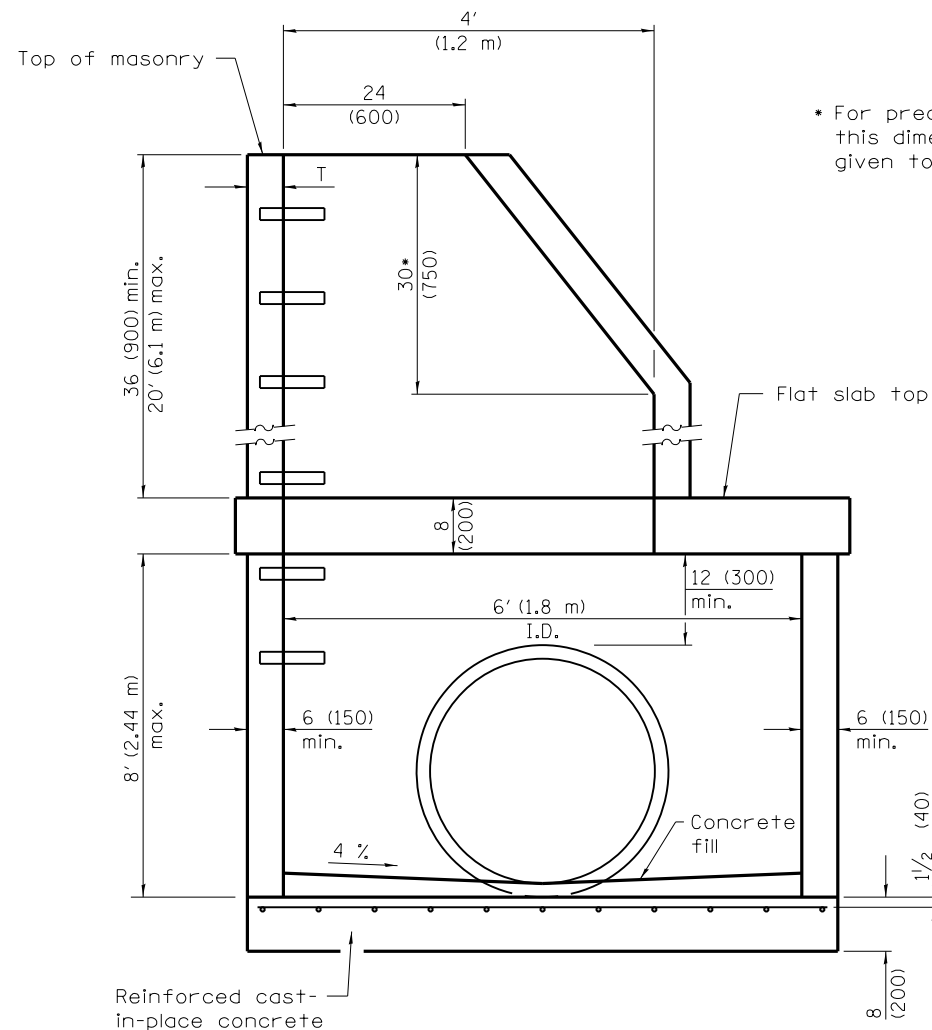
APPROVED January 1, 2011  
*Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES

APPROVED January 1, 2011  
*Scott Schick*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

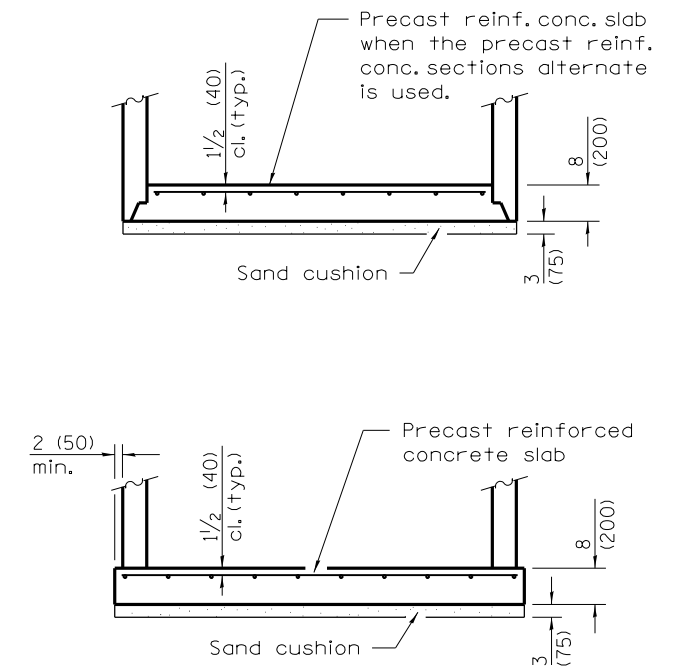


**ELEVATION**  
(with flat slab top only)

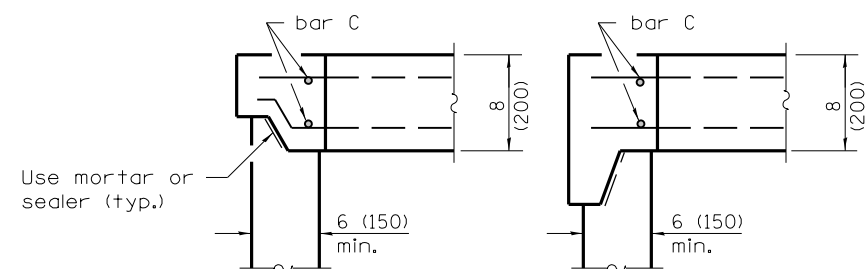


**ELEVATION**  
(with flat slab top and riser)

\* For precast reinforced concrete sections, this dimension may vary from the dimension given to plus 6 (150).



**ALTERNATE BOTTOM SLABS**



**ALTERNATE JOINT CONFIGURATIONS**

ALTERNATE MATERIALS FOR WALLS	T (min)
Concrete Masonry Units	5 (125)
Precast Reinforced Concrete Sections	4 (100)
Cast-in-Place Concrete	6 (150)

**GENERAL NOTES**

Joint configuration and dimensions of flat slab top shall match and fit the riser joint detail.

Lifting devices shall be approved by the Engineer.

Bottom slabs shall be reinforced with a minimum of 0.37 sq. in./ft. (780 sq. mm /m) in both directions with a maximum spacing of 10 (250)

Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

See Standard 602701 for details of manhole steps.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-12	Added 12 (300) min. from pipe to interm. slab, changed riser to 36 (900) min height.
1-1-11	Modified rein. detail in slabs. Added dim. to riser.
	Revised general notes.

**MANHOLE TYPE A**  
**6' (1.8 m) DIAMETER**

(Sheet 1 of 2)

**STANDARD 602406-05**

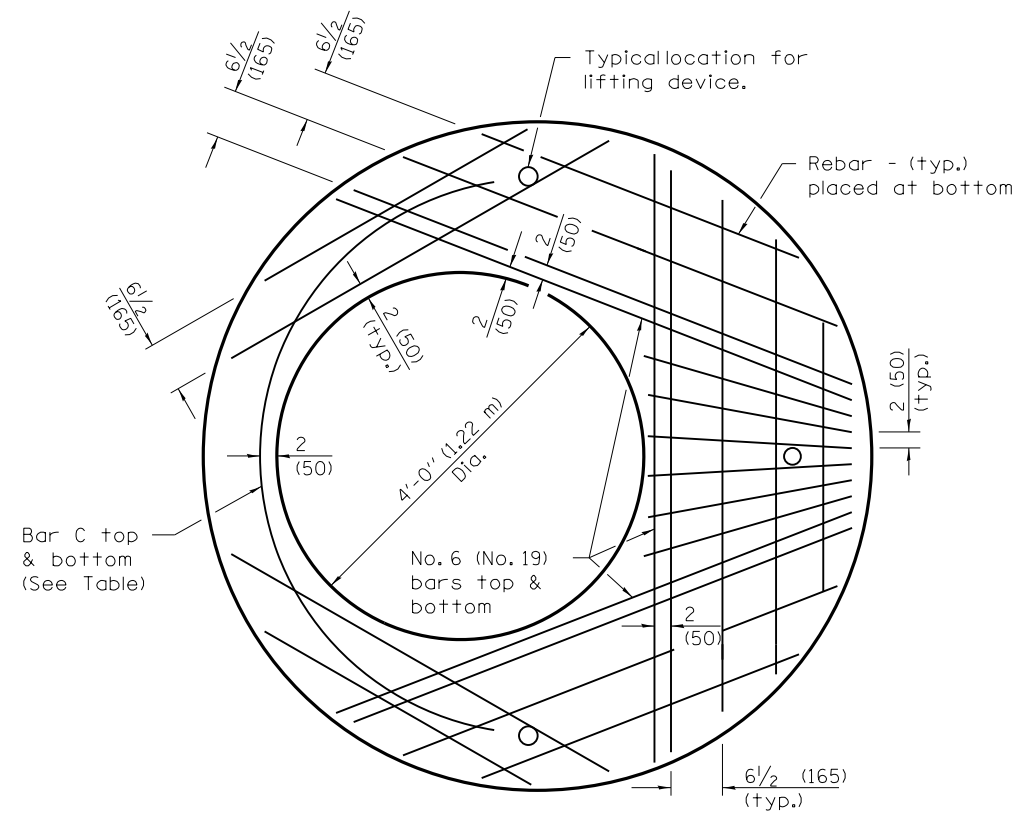
Illinois Department of Transportation

PASSED January 1, 2012  
*Michael Beard*  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2012  
*Scott Esdaile*  
ENGINEER OF DESIGN AND ENVIRONMENT

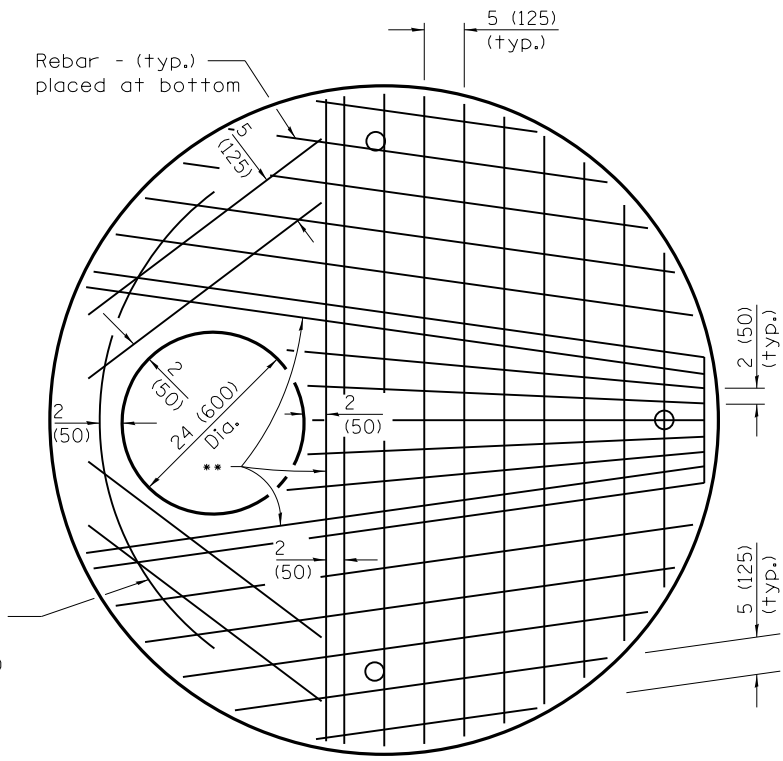
ISSUED 1-1-97  
46-1-97



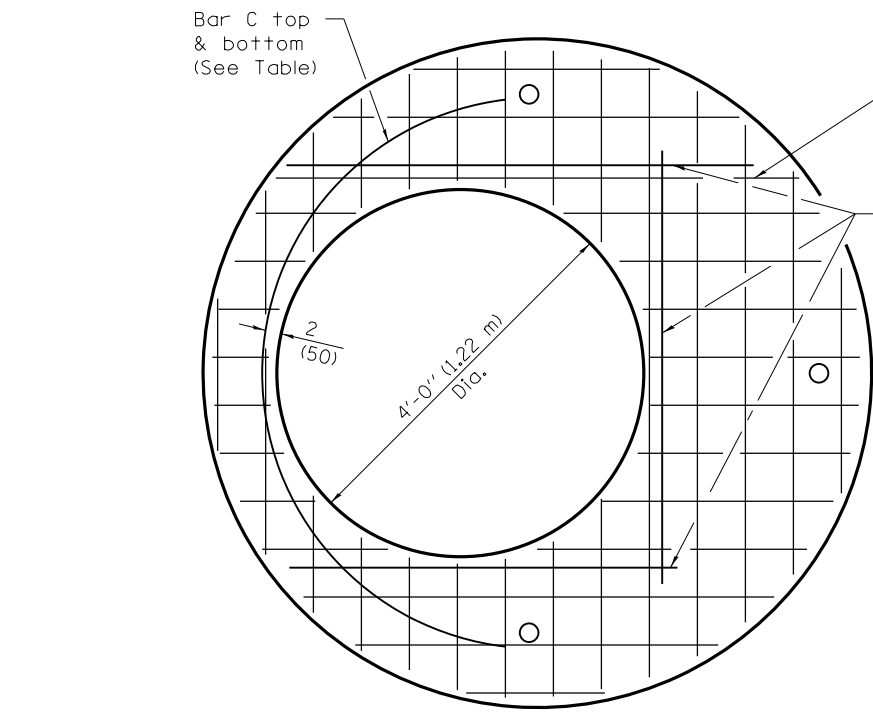


**PLAN**

Showing Rebar Reinforcement

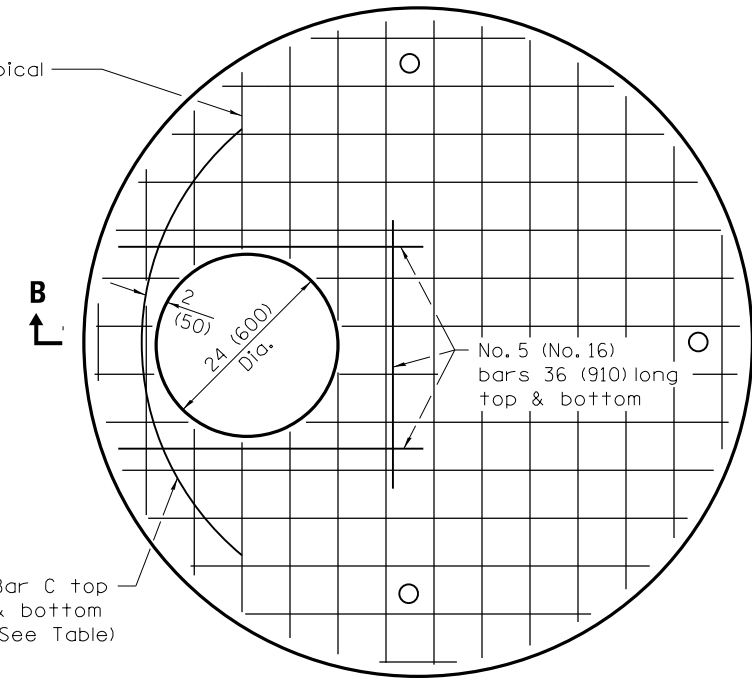


\*\* No. 6 (No. 19) bars top & bottom

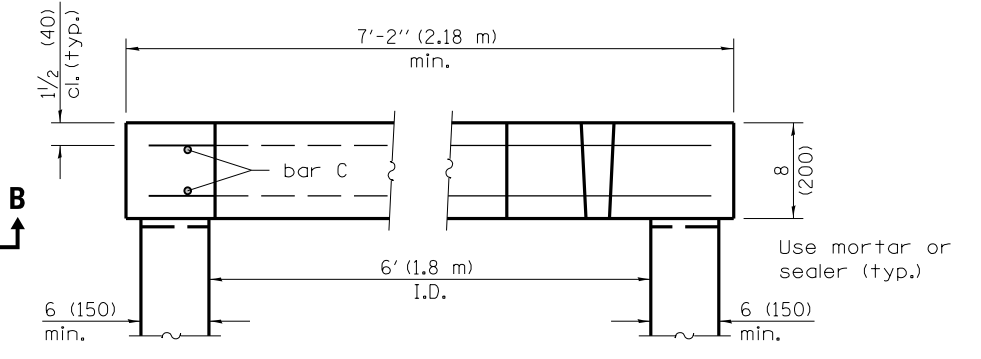


**PLAN**

Showing Welded Wire Fabric Reinforcement



Diameter of opening	Thickness	Reinforcement "As" WWF Each direction	Bar Size	No. 4 (No. 13) Bar C	
				Length	Radius
24 (600)	8 (200)	1.06 sq. in./ft. (2244 sq. mm/m)	No. 6 (No. 19)	6'-0" (1.83 m)	38 (965)
4'-0" (1.2 m)	8 (200)	0.82 sq. in./ft. (1736 sq. mm/m)	No. 6 (No. 19)	9'-0" (2.74 m)	38 (965)



**SECTION B-B**

Illinois Department of Transportation

PASSED January 1, 2012

Michael Beard  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2012

Scott Esdaile  
ENGINEER OF DESIGN AND ENVIRONMENT

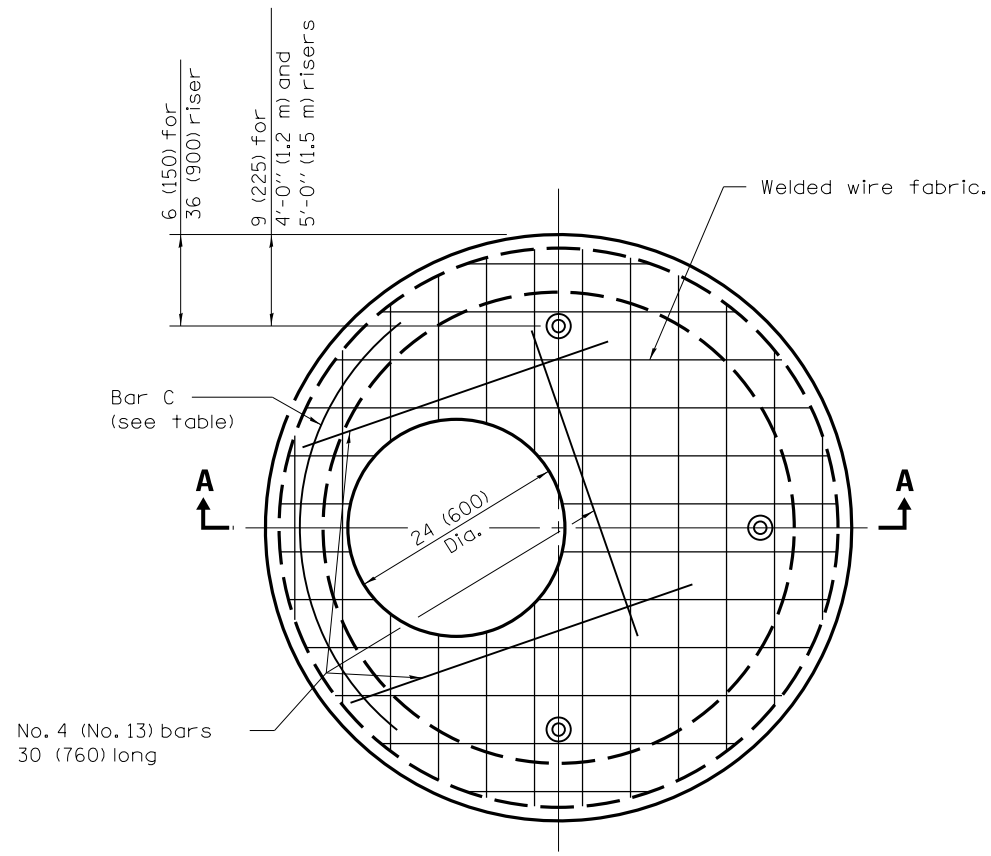
ISSUED 1-1-97

**MANHOLE TYPE A**

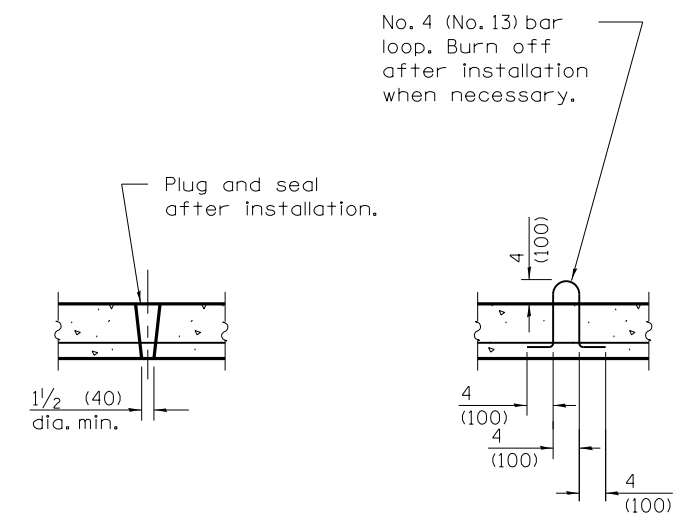
**6' (1.8 m) DIAMETER**

(Sheet 2 of 2)

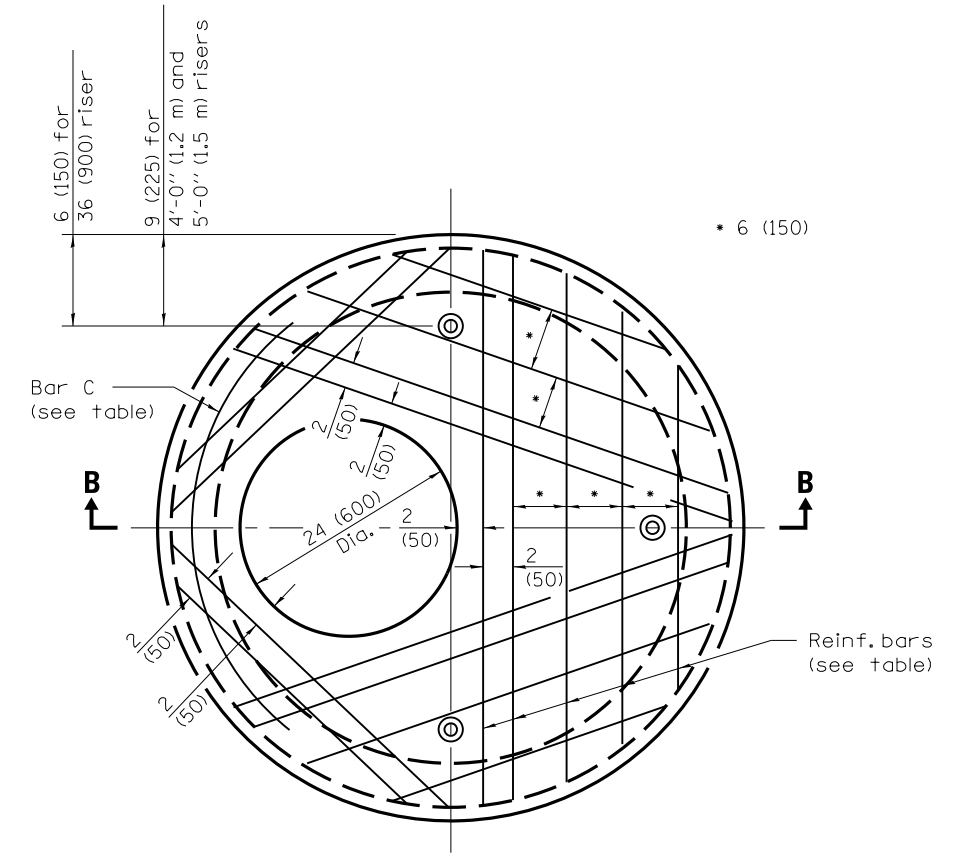
**STANDARD 602406-05**



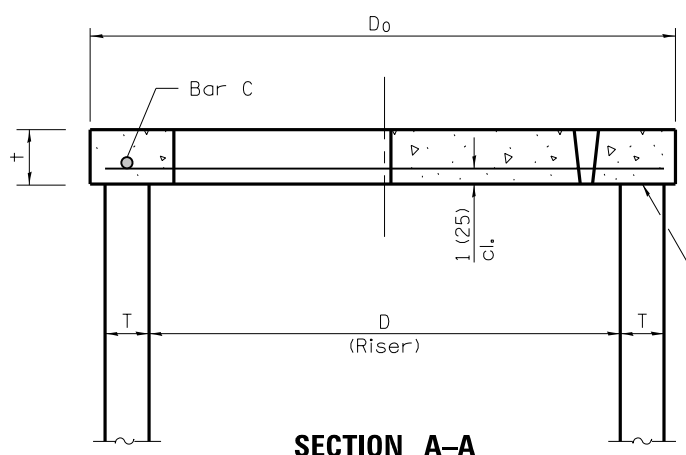
**PLAN**  
(WELDED WIRE FABRIC)



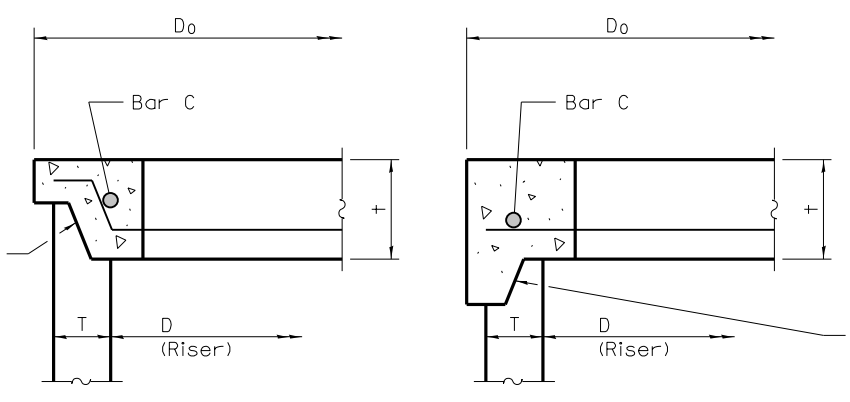
**LIFTING HOLE OR LIFTING LOOP**  
**TYPICAL**  
(3 required per slab)



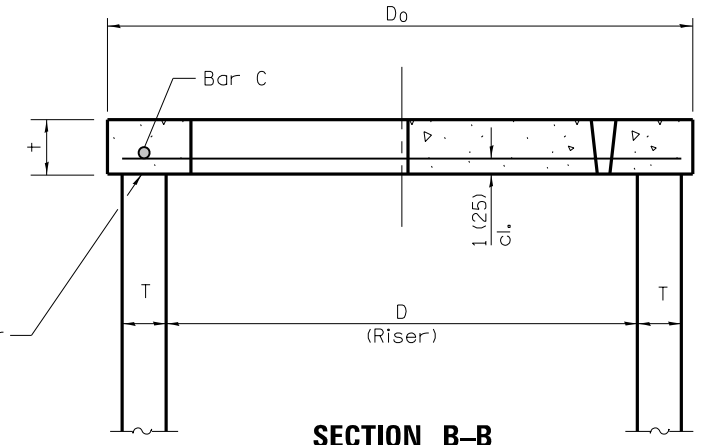
**PLAN**  
(REINFORCEMENT BARS)



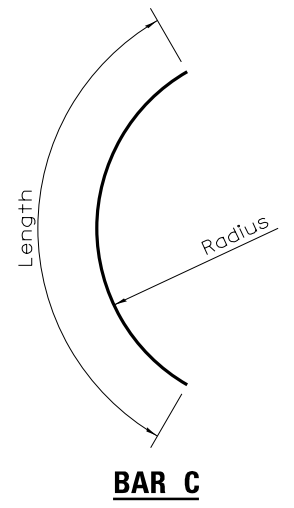
**SECTION A-A**



**ALTERNATE JOINT CONFIGURATIONS**



**SECTION B-B**



**BAR C**

**TABLE**

D	T	Do (min.)	t	Reinforcement		No. 4 (No. 13) Bar C	
				"As" W.W.F. each direction	QR Bar size	Length	Radius
36 (900)	See applicable Standards	D + 2T	6 (150)	0.20 sq. in./ft. (425 sq. mm/m)	No. 4 (No. 13)	4'-0" (1.2 m)	19 (480)
4'-0" (1.2 m)			6 (150)	0.35 sq. in./ft. (740 sq. mm/m)	No. 5 (No. 16)	4'-6" (1.35 m)	26 (660)
5'-0" (1.5 m)			8 (200)	0.35 sq. in./ft. (740 sq. mm/m)	No. 5 (No. 16)	5'-0" (1.5 m)	32 (810)

**GENERAL NOTES**

The flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602011, 602016, 602306, 602401, or 602501 at the option of the Contractor or when field conditions prohibit the use of tapered tops.

All dimensions are in millimeters (inches) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

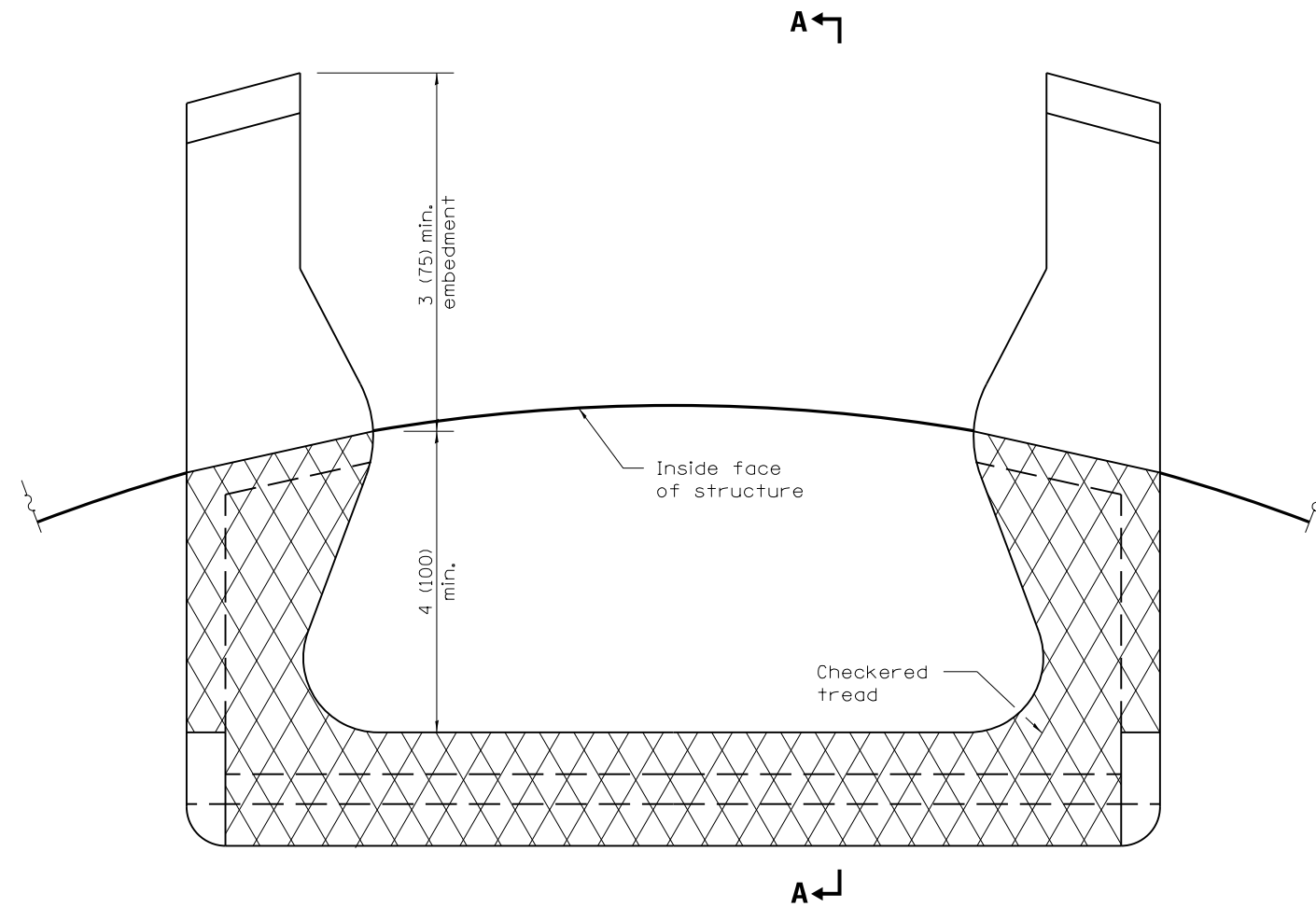
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

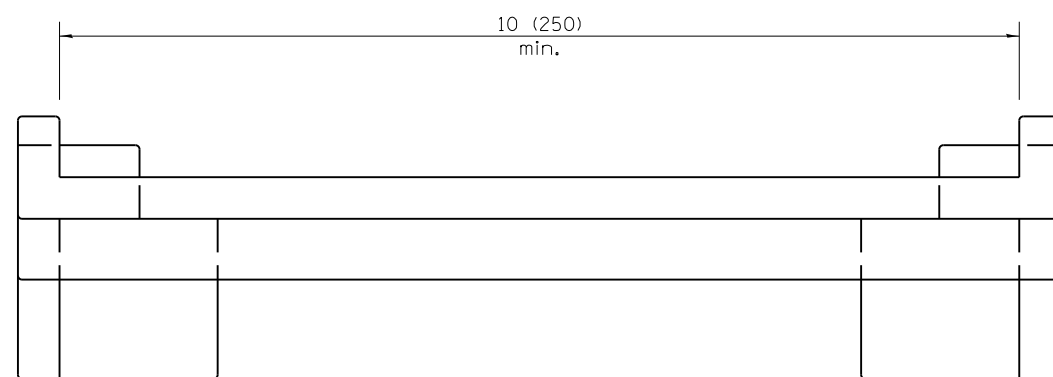
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-07	Soft converted metric reinforcement bars.

**PRECAST REINFORCED CONCRETE FLAT SLAB TOP**

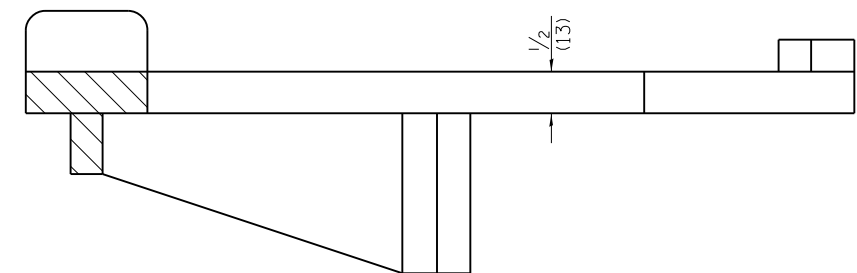
**STANDARD 602601-02**



**PLAN VIEW**



**ELEVATION VIEW**



**SECTION A-A**

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

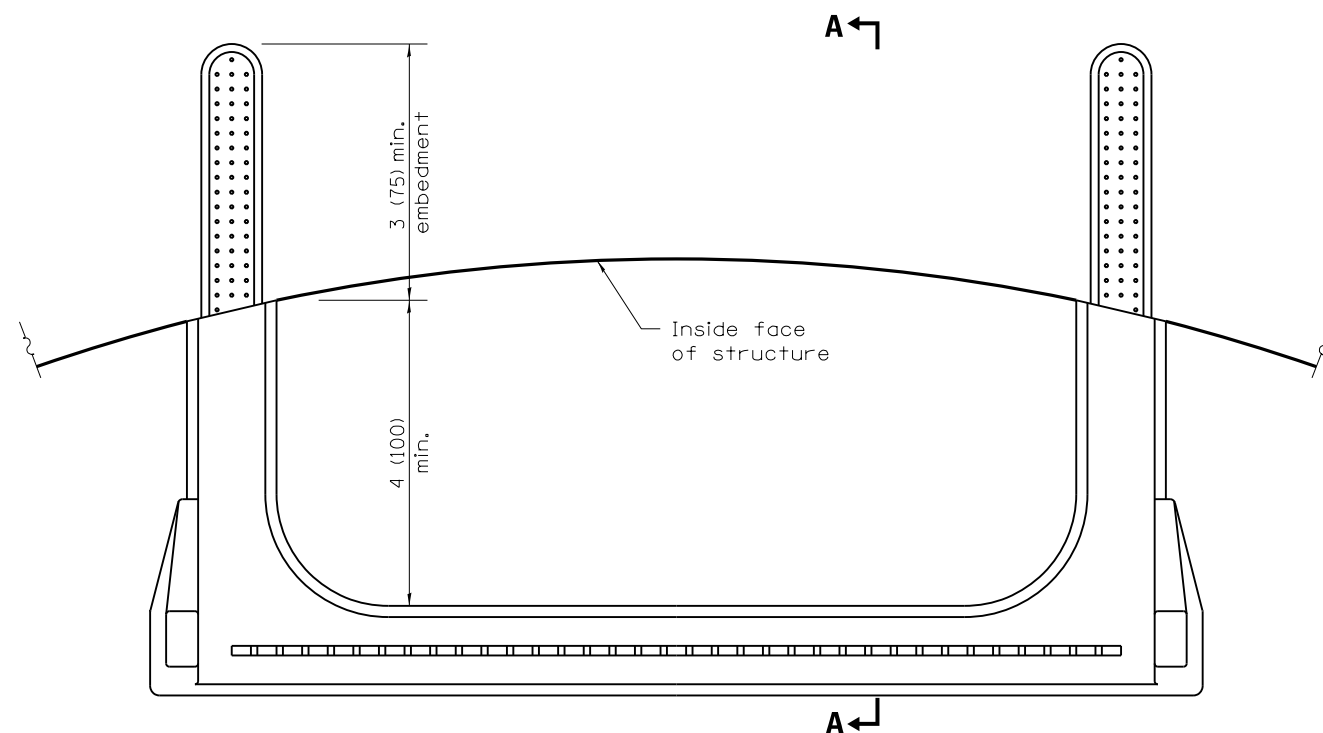
ISSUED 1-1-97

DATE	REVISIONS
1-1-09	Switched units to English (metric).
4-1-06	Revised title, drawings, and added plastic steps on sheet 2.

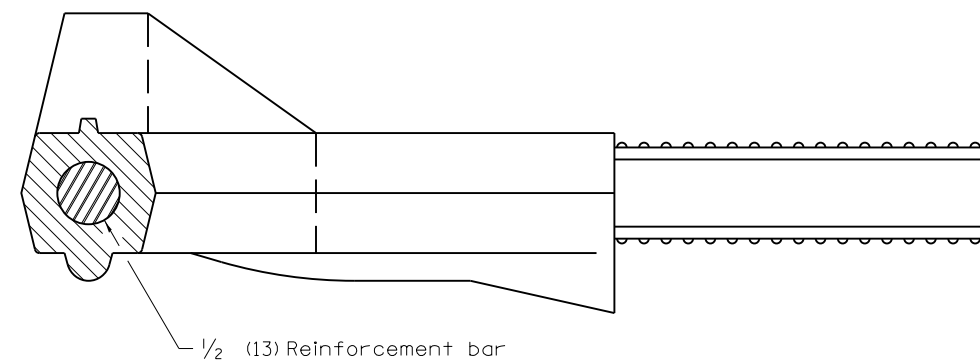
**MANHOLE STEPS**

(Sheet 1 of 2)

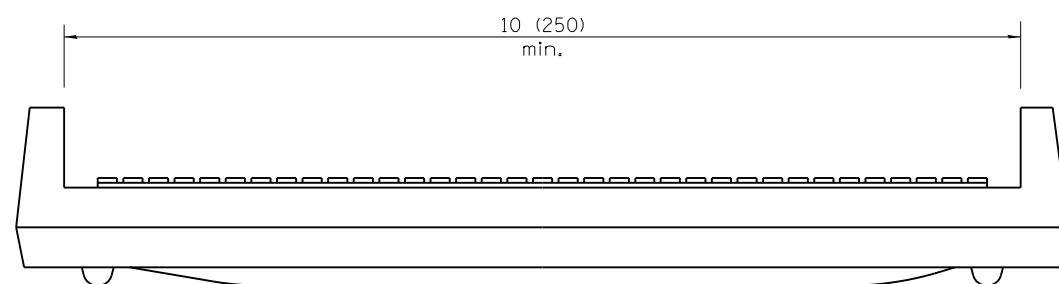
**STANDARD 602701-02**



**PLAN VIEW**



**SECTION A-A**



**ELEVATION VIEW**

Illinois Department of Transportation

PASSED January 1, 2009

*Scott Smith*  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

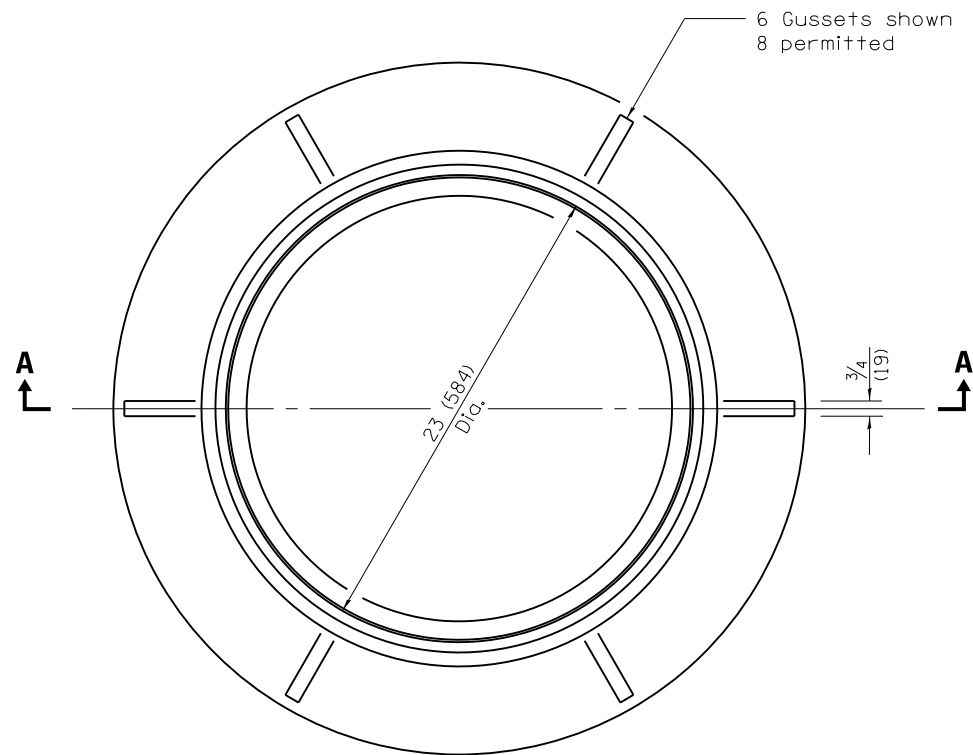
*Ken E. Han*  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

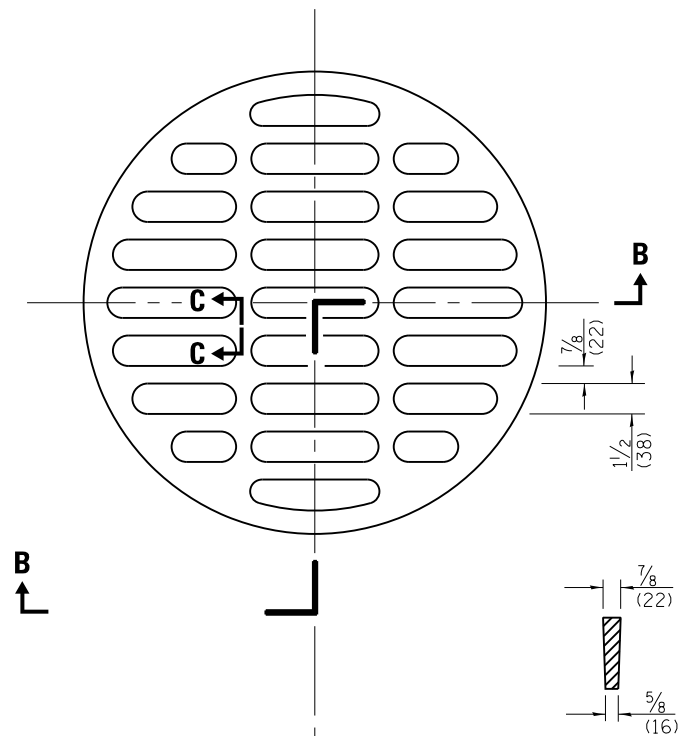
**MANHOLE STEPS**

(Sheet 2 of 2)

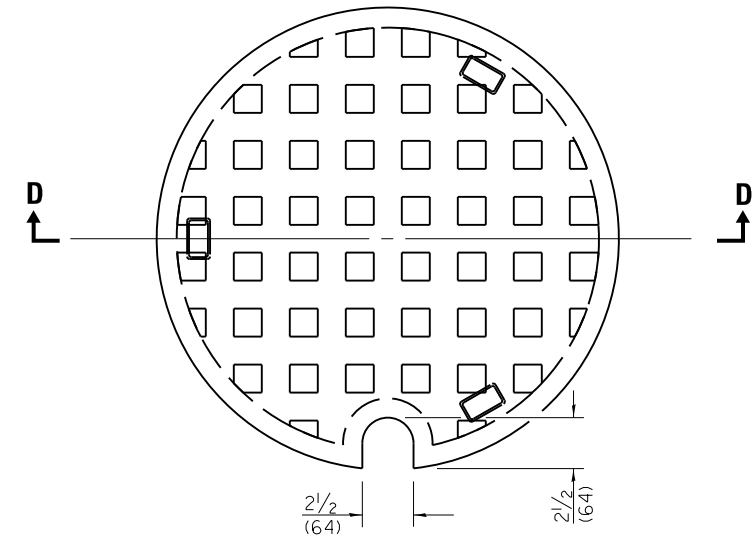
**STANDARD 602701-02**



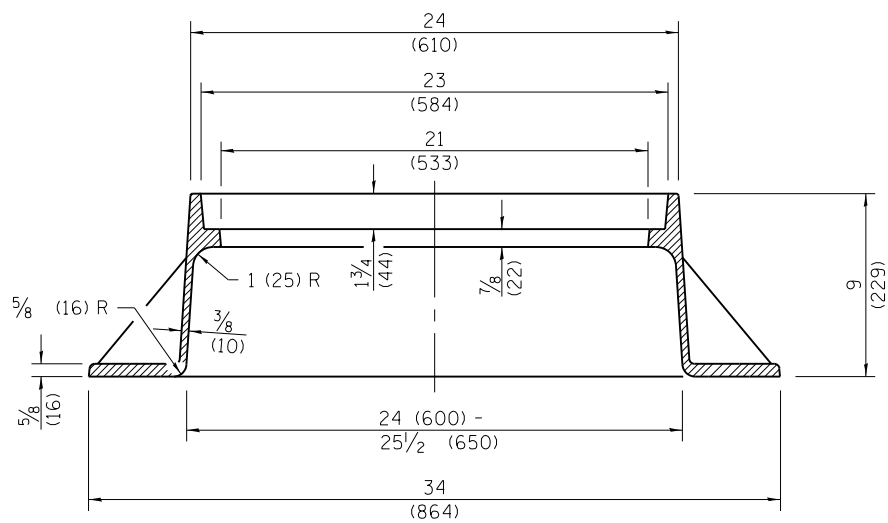
**CAST FRAME**



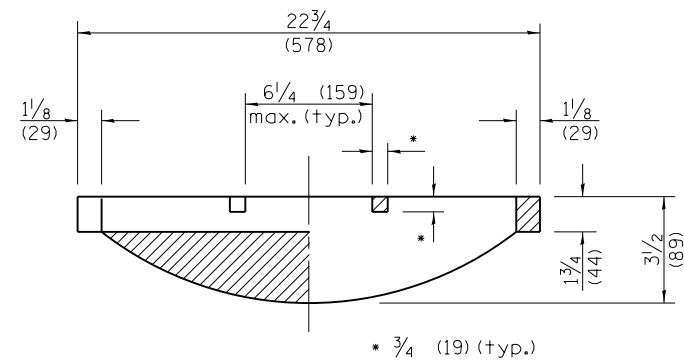
**SECTION C-C**



**SECTION D-D**

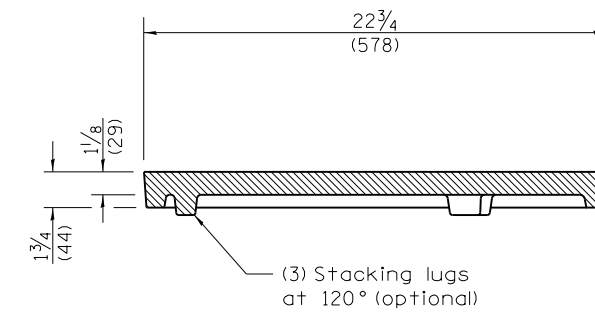


**SECTION A-A**  
Gray Iron



**SECTION B-B**

**CAST OPEN LID**



**CAST CLOSED LID**  
Gray Iron Lid

All dimensions are in inches (millimeters)  
unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

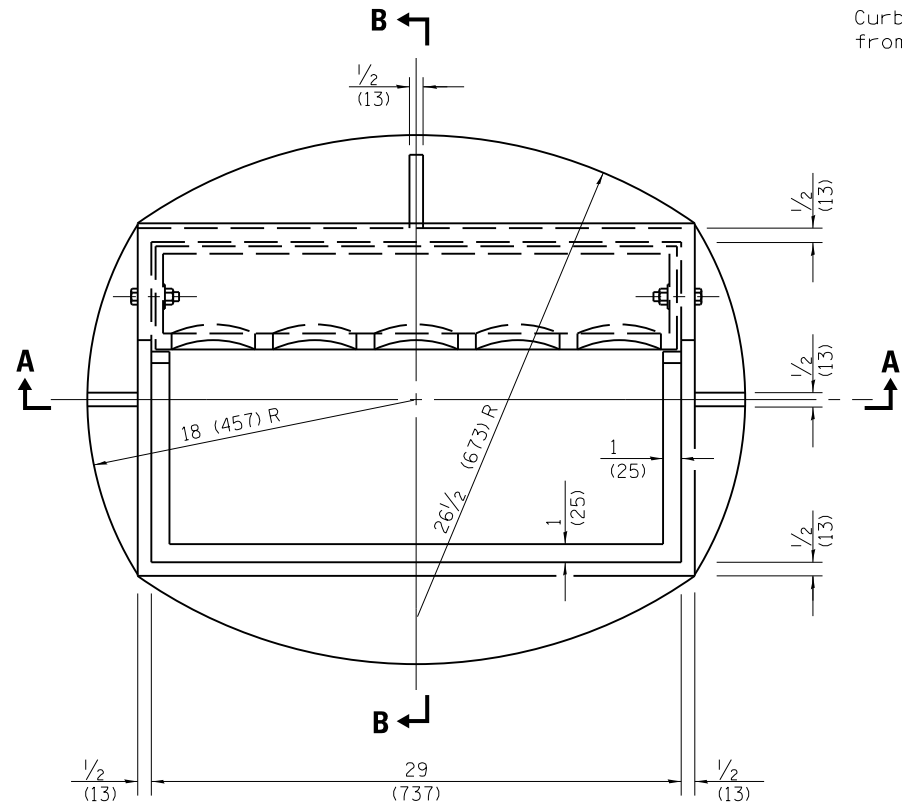
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-04	Removed weights.

**FRAME AND LIDS  
TYPE 1**

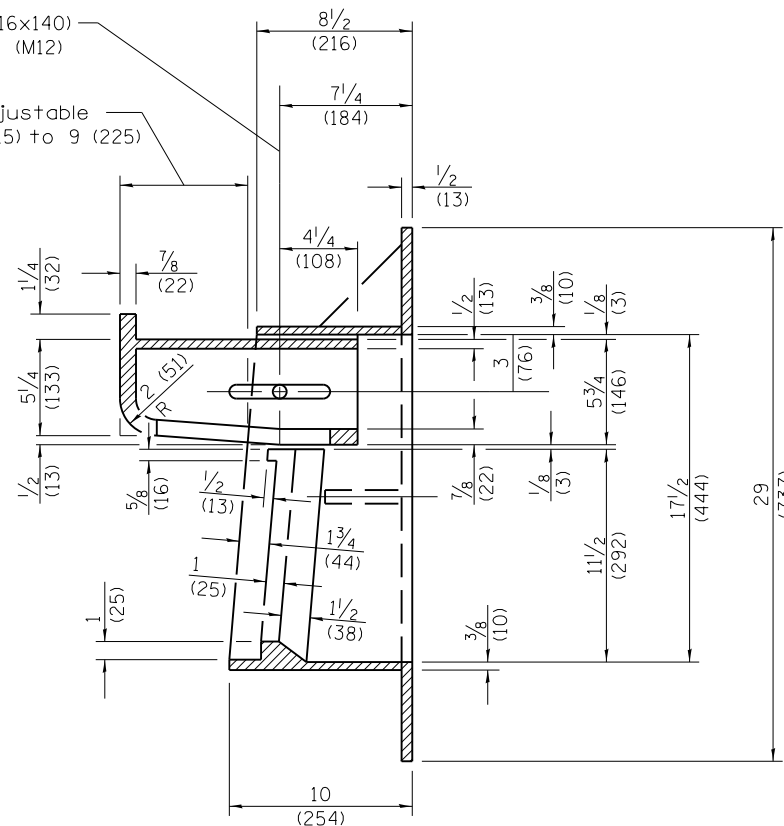
**STANDARD 604001-03**

Ø 5/8 (10) Dia. hole and 5/8x5/2 (16x140) slotted hole for galvanized 1/2 (M12) bolt, nut, and washer.

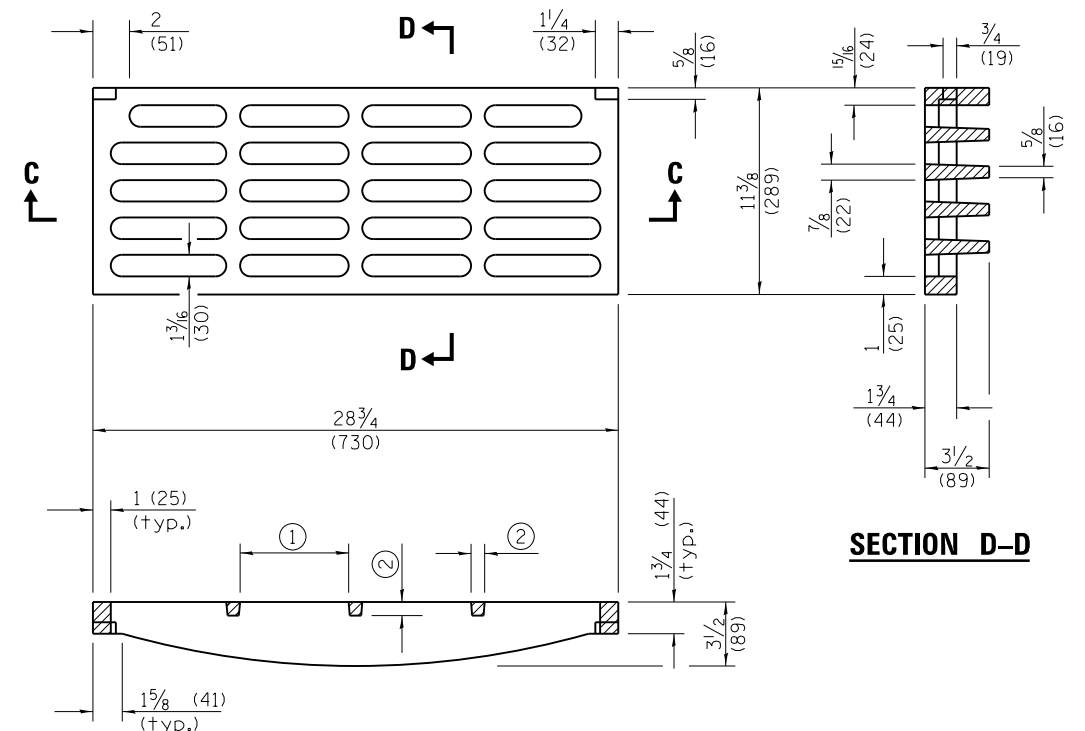
Curb box adjustable from 4 1/2 (115) to 9 (225)



**CAST FRAME**



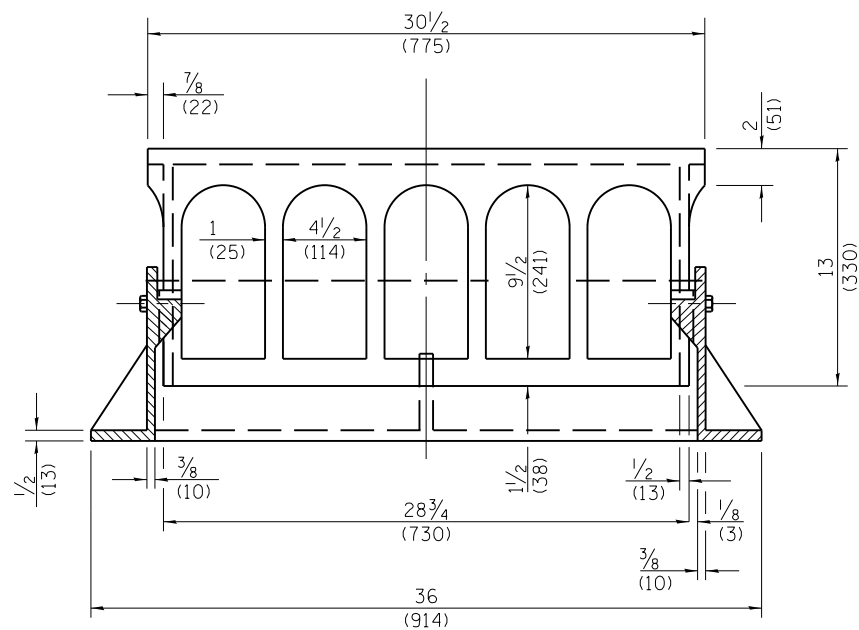
**SECTION B-B**



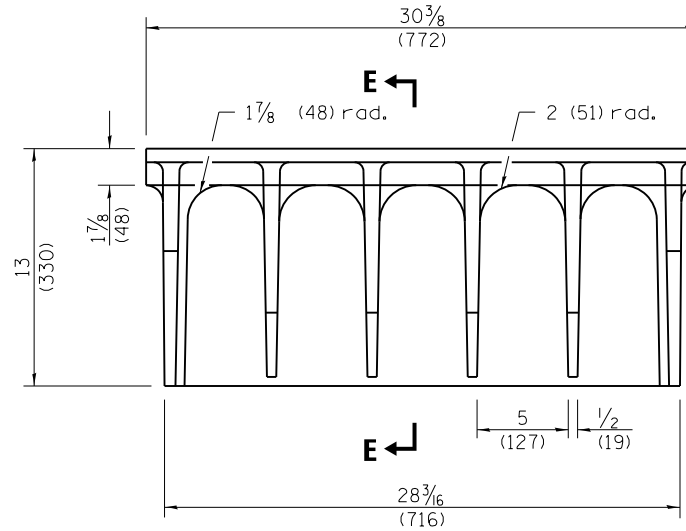
**SECTION C-C**

- ① = 6 1/4 (159) max. (typ.)
- ② = 3/4 (19) min. (typ.)

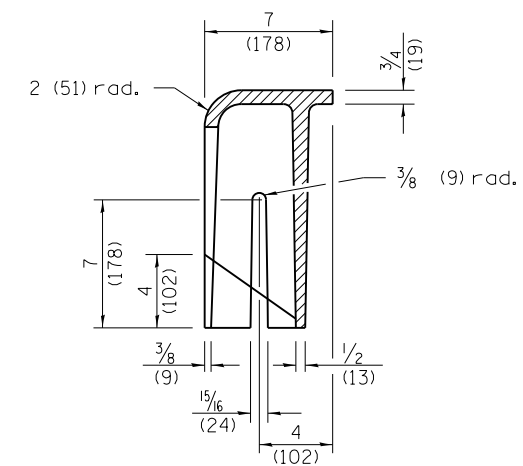
**CAST GRATE**



**SECTION A-A**



**ALTERNATE CURB BOX**



**SECTION E-E**

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

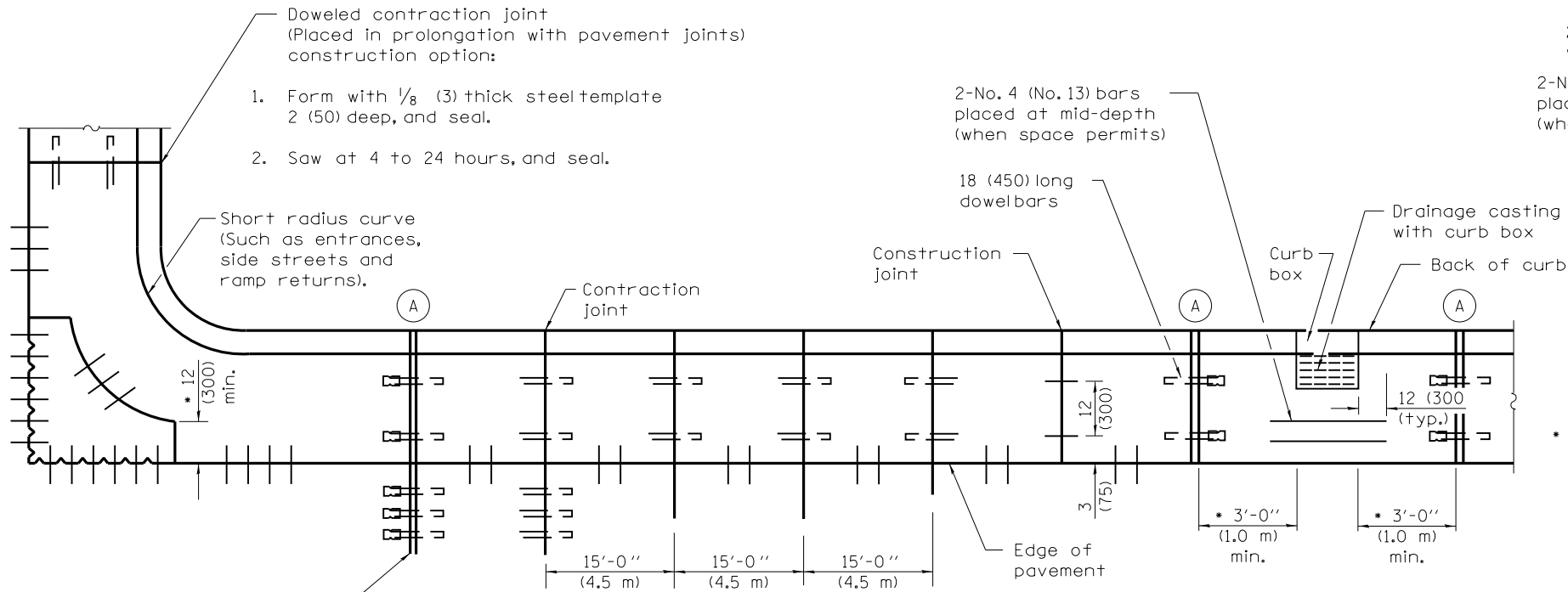
ISSUED 49-1-1 03/05

DATE	REVISIONS
4-1-09	Switched units to English (metric).
4-1-06	Added alternate curb box.

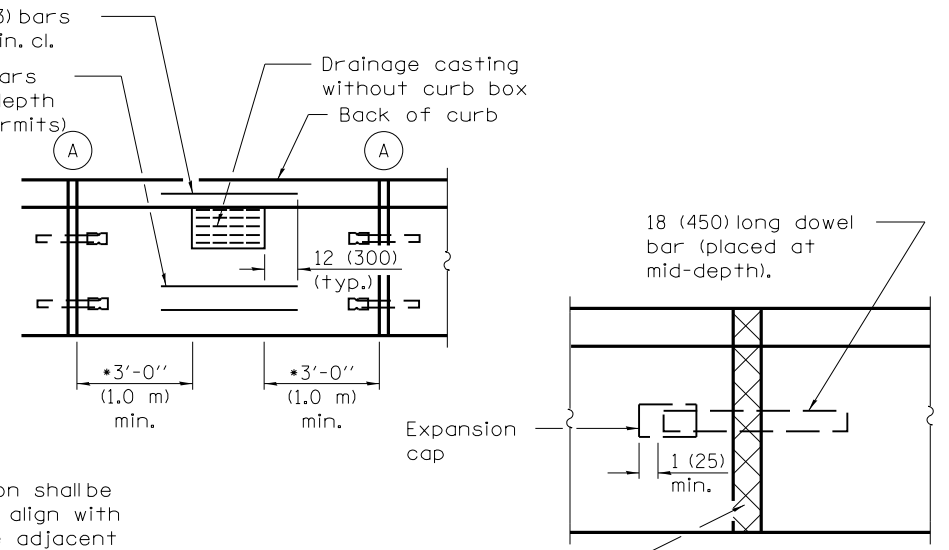
**FRAME AND GRATE**

**TYPE 11**

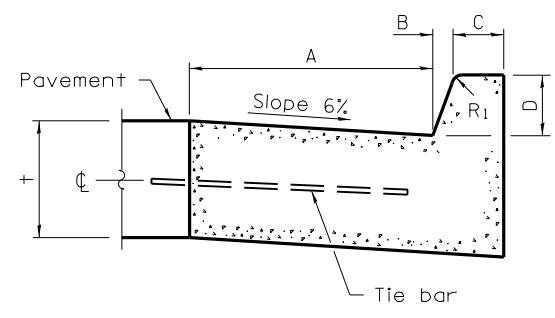
**STANDARD 604051-03**



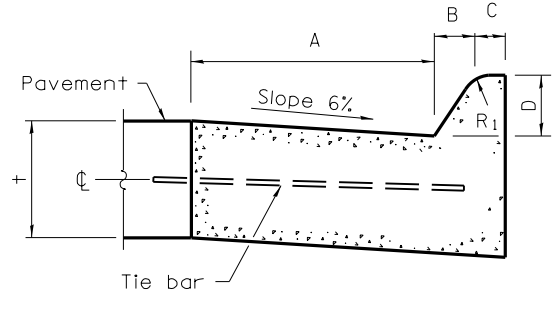
**PLAN**  
**ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE**



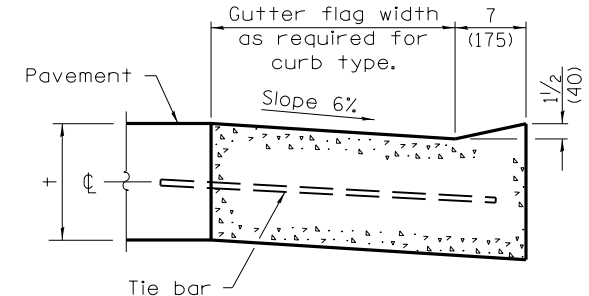
**DETAIL A**  
**EXPANSION JOINT**



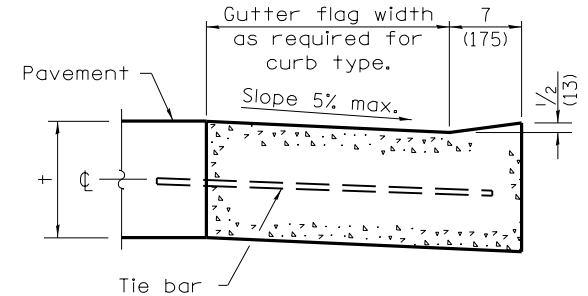
**BARRIER CURB**



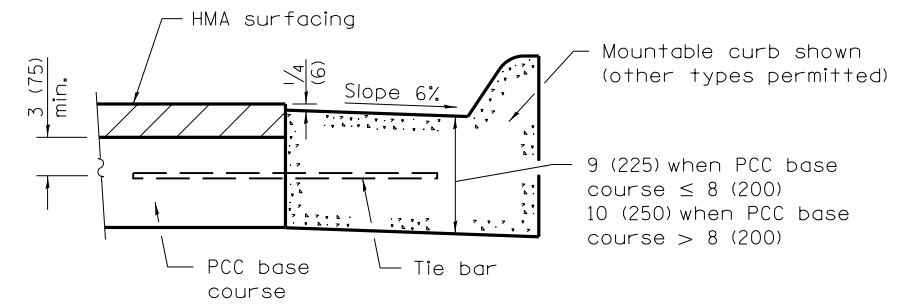
**MOUNTABLE CURB**



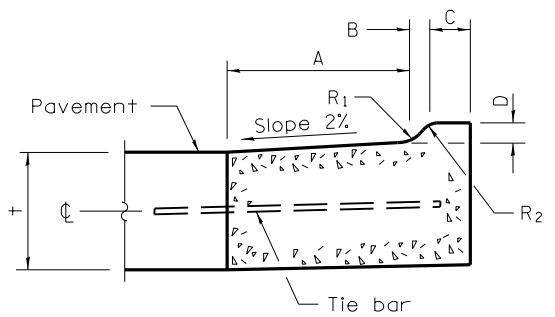
**DEPRESSED CURB (TYPICAL)**



**DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED**



**ADJACENT TO PCC BASE COURSE WITH HMA SURFACING**



**M-2.06 (M-5.15) and M-2.12 (M-5.30)**

TABLE OF DIMENSIONS BARRIER CURB					
TYPE	A	B	C	D	R <sub>1</sub>
B-6.12 (B-15.3)	12 (300)	1 (25)	6 (150)	6 (150)	1 (25)
B-6.18 (B-15.45)	18 (450)	1 (25)	6 (150)	6 (150)	1 (25)
B-6.24 (B-15.60)	24 (600)	1 (25)	6 (150)	6 (150)	1 (25)
B-9.12 (B-22.30)	12 (300)	2 (50)	5 (125)	9 (225)	1 (25)
B-9.18 (B-22.45)	18 (450)	2 (50)	5 (125)	9 (225)	1 (25)
B-9.24 (B-22.60)	24 (600)	2 (50)	5 (125)	9 (225)	1 (25)

TABLE OF DIMENSIONS MOUNTABLE CURB						
TYPE	A	B	C	D	R <sub>1</sub>	R <sub>2</sub>
M-2.06 (M-5.15)	6 (150)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M-2.12 (M-5.30)	12 (300)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M-4.06 (M-10.15)	6 (150)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.12 (M-10.30)	12 (300)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.18 (M-10.45)	18 (450)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.24 (M-10.60)	24 (600)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-6.06 (M-15.15)	6 (150)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.12 (M-15.30)	12 (300)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.18 (M-15.45)	18 (450)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.24 (M-15.60)	24 (600)	6 (150)	2 (50)	6 (150)	2 (50)	NA

**GENERAL NOTES**

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 6 (No. 19) at 24 (600) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

All dimensions are in inches (millimeters) unless otherwise shown.

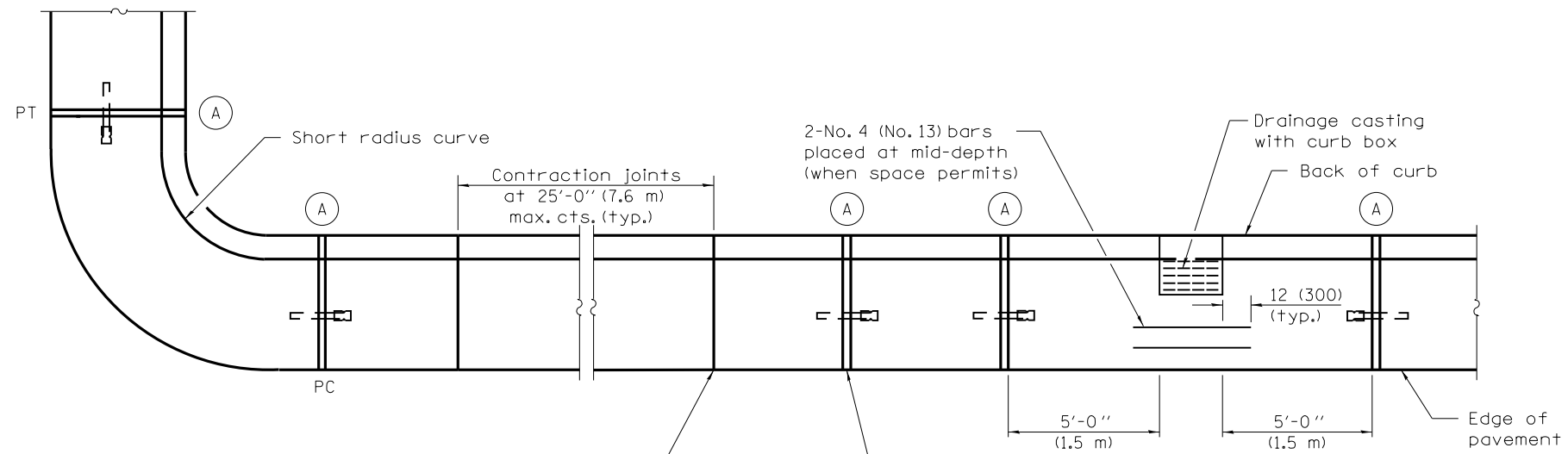
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-07	Switched to Hot-Mix Asphalt (HMA) terminology.

**CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER**  
(Sheet 1 of 2)

**STANDARD 606001-04**

Illinois Department of Transportation  
 PASSED January 1, 2009  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2009  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



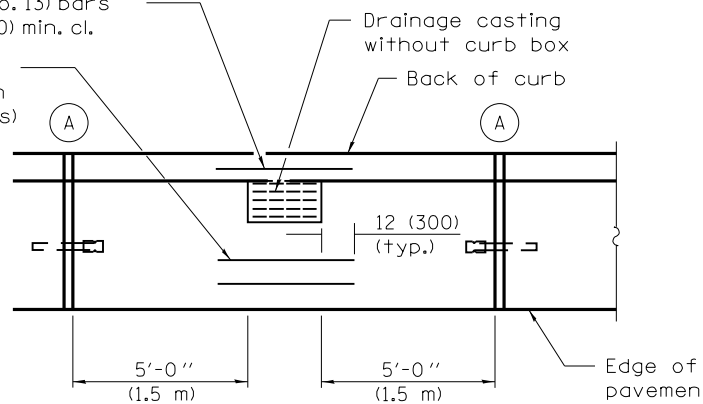
Undoweled contraction joint (typ.) construction options:

1. Form with 1/8 (3) thick steel template 2 (50) deep, and seal.
2. Saw 2 (50) deep at 4 to 24 hours, and seal.
3. Insert 3/4 (20) thick preformed joint filler full depth and width.

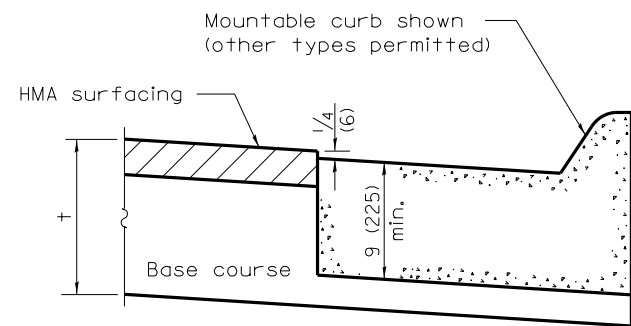
Construction joint

2-No. 4 (No. 13) bars with 2 (50) min. cl.

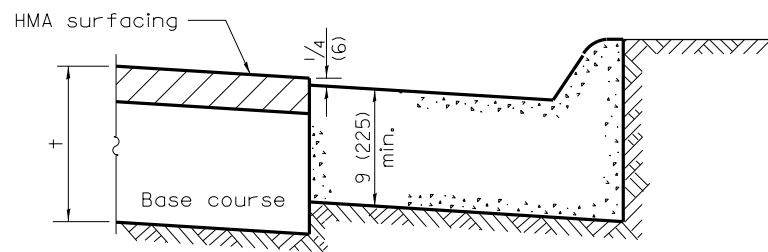
2-No. 4 (No. 13) bars placed at mid-depth (when space permits)



**PLAN**

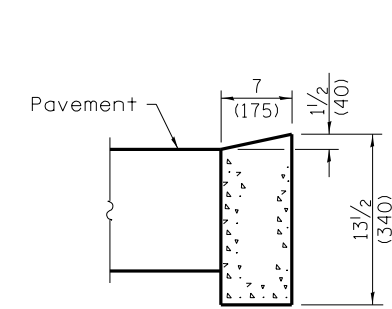


**ON DISTURBED SUBGRADE**

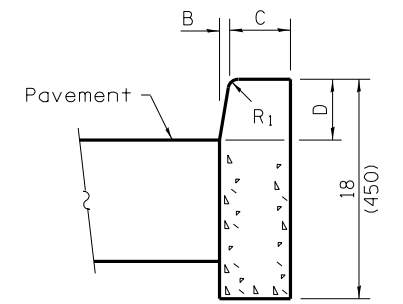


**ON UNDISTURBED SUBGRADE**

**ADJACENT TO FLEXIBLE PAVEMENT**

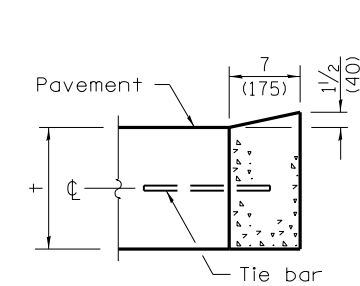


**DEPRESSED CURB**

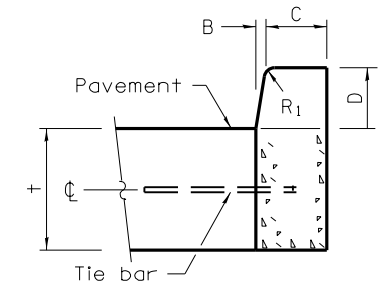


**BARRIER CURB**

**ADJACENT TO FLEXIBLE PAVEMENT**



**DEPRESSED CURB**



**BARRIER CURB**

**ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE**

**CONCRETE CURB TYPE B**

**CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER**

(Sheet 2 of 2)

**STANDARD 606001-04**

Illinois Department of Transportation

PASSED January 1, 2009

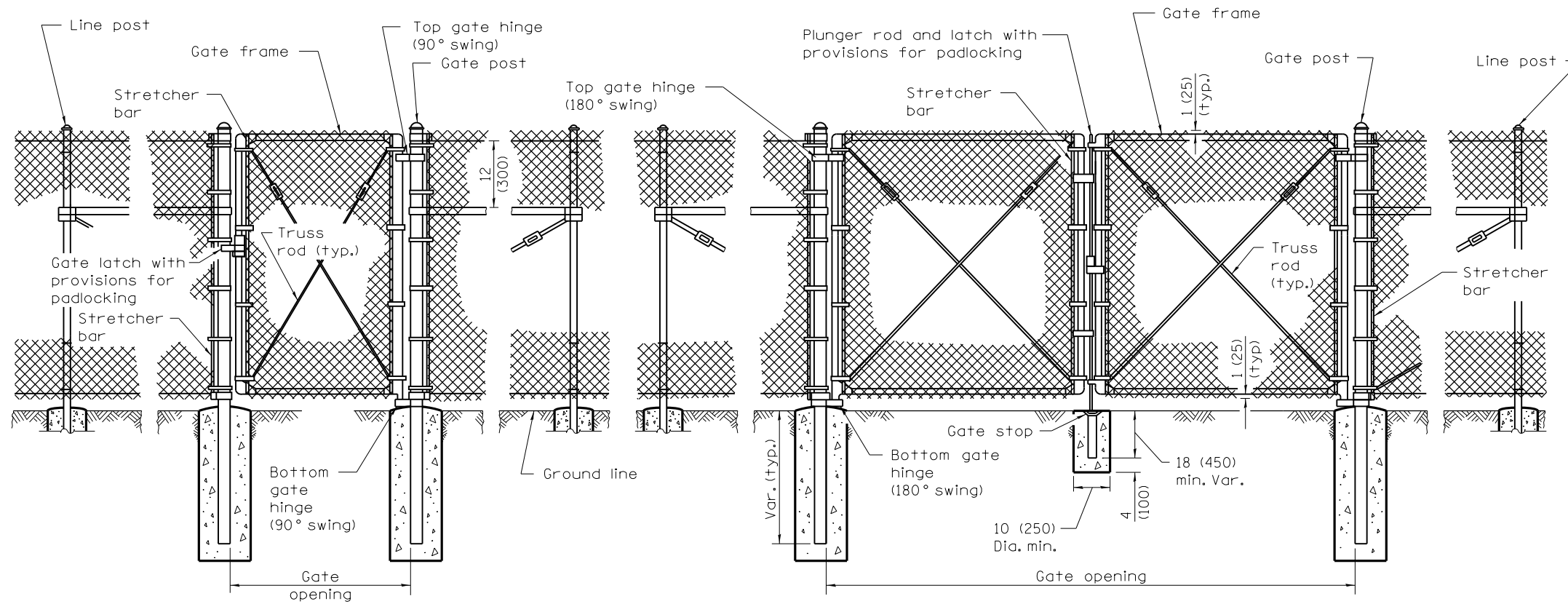
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

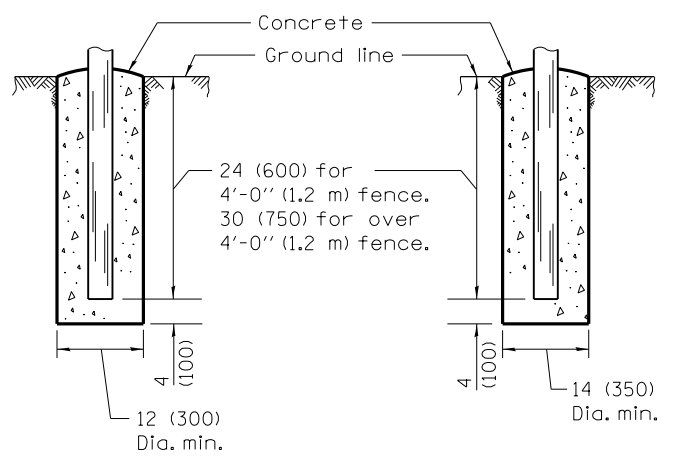
ISSUED 1-1-97





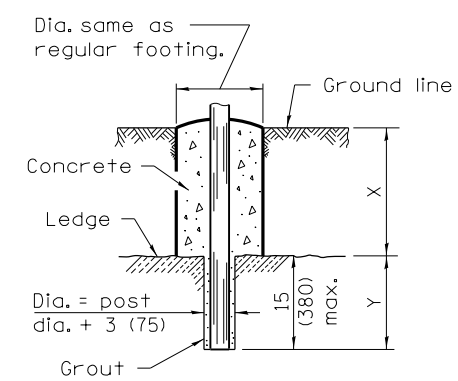
**PEDESTRIAN GATE ARRANGEMENT**

**VEHICLE GATE ARRANGEMENT**

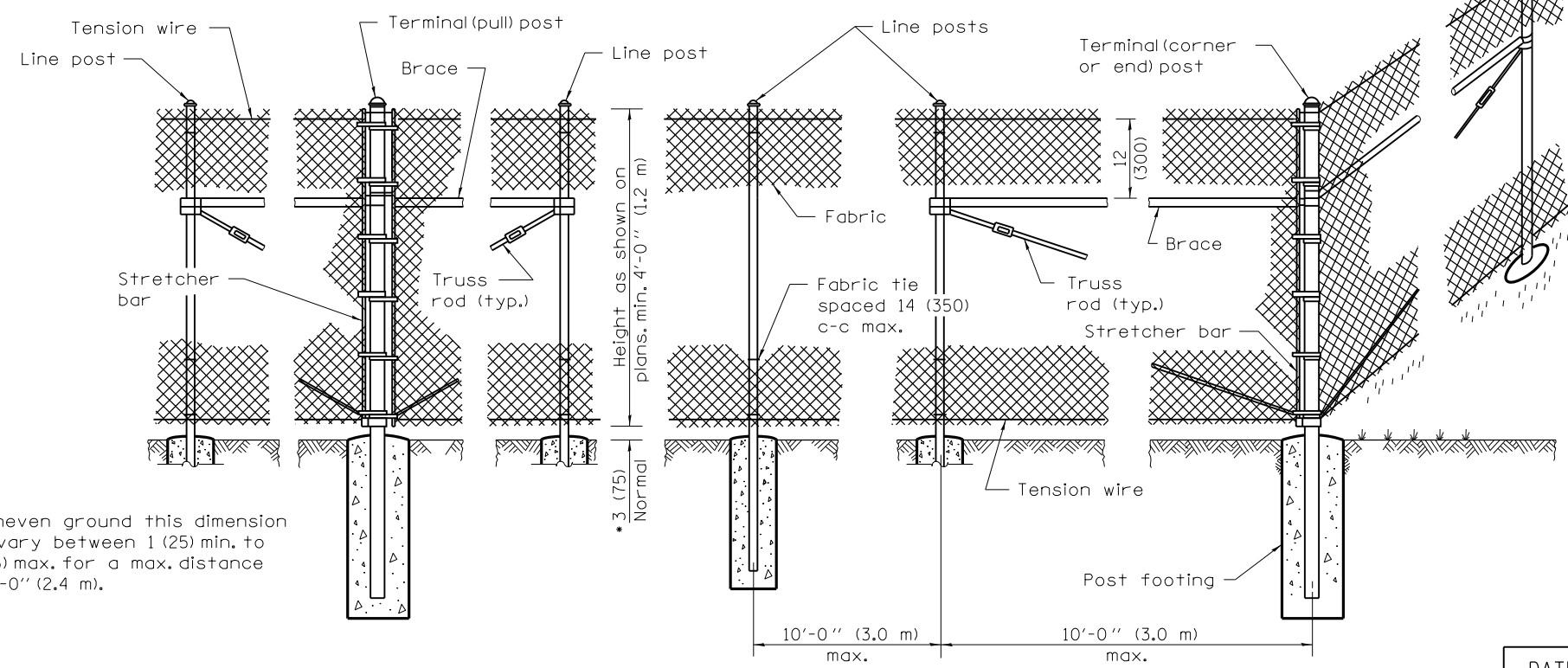


**FOOTING FOR LINE POST**

**FOOTING FOR GATE & TERMINAL POST**



**FOOTING FOR POST IN ROCK LEDGE**



**PULL POST ARRANGEMENT**

**LINE POST ARRANGEMENT**

**CORNER OR END POST ARRANGEMENT**

\* On uneven ground this dimension may vary between 1 (25) min. to 5 (125) max. for a max. distance of 8'-0" (2.4 m).

**GENERAL NOTES**

Pullposts shall be placed at locations determined by the Engineer. They shall be placed at 660' (200 m) intervals between posts to which the ends of the fabric are clamped or midway between such posts when the distance is less than 1320' (400 m) and greater than 660' (200 m).

X + Y shall not exceed 24 (600), 30 (750), or 36 (900), as applicable. When X is 0 - 9 (0 - 225), 15 (380), or 21 (525), then Y = 15 (375) and the post shall be shortened as required. When X exceeds 9 (225), 15 (380), or 21 (525), then Y shall be decreased correspondingly.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

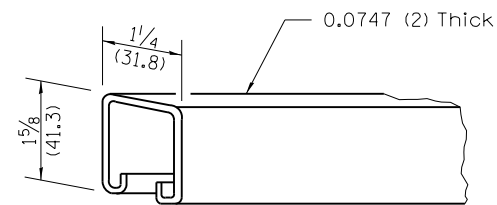
ISSUED 1-1-97

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-99	Rev. "pans" to "plans" in LINE POST ARRANGEMENT.

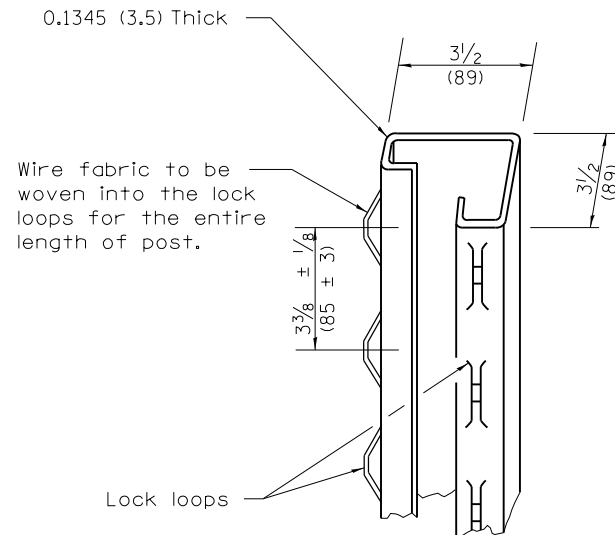
**CHAIN LINK FENCE**

(Sheet 1 of 3)

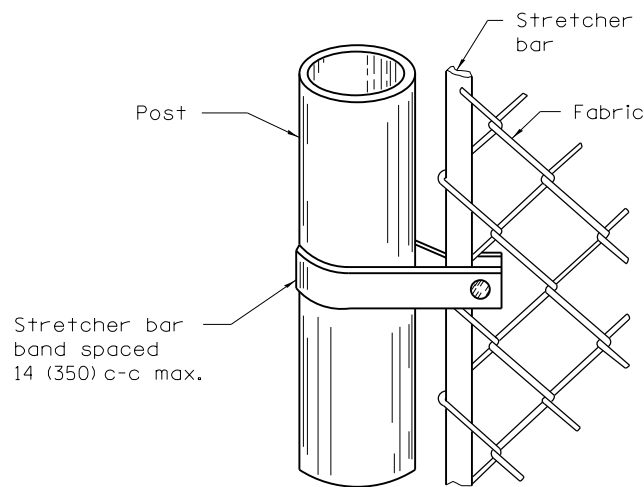
**STANDARD 664001-02**



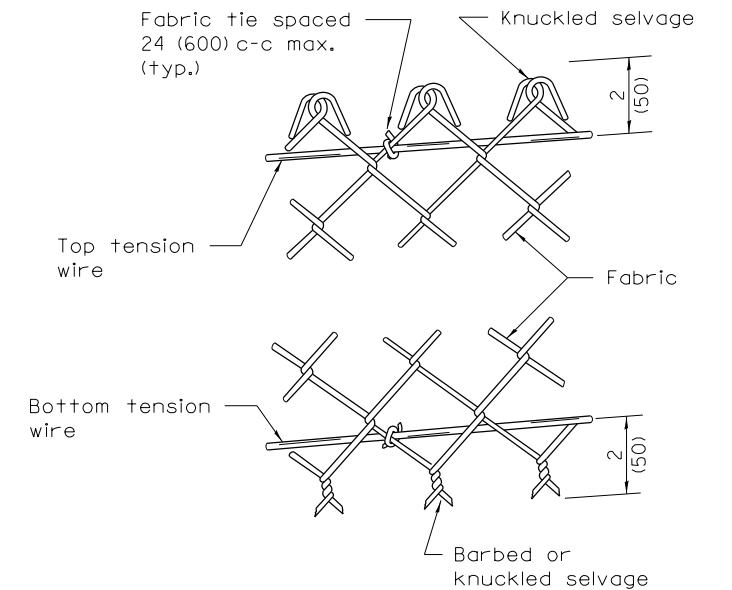
**ROLL FORMED SECTION OF BRACE**



**ROLL FORMED SECTION OF TERMINAL & GATE POST**



**METHOD OF FASTENING STRETCHER BAR TO POST**



**METHOD OF TYING FABRIC TO TENSION WIRES**

LINE POST	
Section	lbs./ft. (kg/m)
Pipe Type A 1.90 (48.3) O.D.	2.72 (4.05)
Pipe Type B 1.90 (48.3) O.D.	2.28 (3.39)
Pipe Type C 1.90 (48.3) O.D.	2.26 (3.36)
H 1.875x1.625 (47.6x41.3)	2.72 (4.05)
□	1.60 (2.38)
I	2.30 (3.42)

TERMINAL POST	
Section	lbs./ft. (kg/m)
Pipe Type A 2.375 (60.3) O.D.	3.65 (5.43)
Pipe Type B 2.375 (60.3) O.D.	3.11 (4.63)
Pipe Type C 2.375 (60.3) O.D.	3.09 (4.60)
RollFormed 3 1/2 x 3 1/2 (89.0 x 89.0)	See detail
Sq. Tubing 2 1/2 x 2 1/2 (63.5 x 63.5)	4.32 (6.43)

HORIZONTAL BRACES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)
H 1.31x1.5 (33.3x38.1)	2.25 (3.35)
RollFormed 1 5/8 x 1/4 (41.3 x 31.8)	See detail

GATE FRAMES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)

GATE POSTS •							
Gate Opening • ft. (m)		Pipe Type A		Sq. Tubing		Pipe Type B	
Single	Double	Size (O.D.)	lbs./ft. (kg/m)	Size	lbs./ft. (kg/m)	Size (O.D.)	kg/m (lbs./ft.)
Up to 4 (1.2)	Up to 8 (2.5)	2.375 (60.3)	3.65 (5.43)	2 1/2 (63.5)	4.32 (6.43)	2.375 (60.3)	3.11 (4.63)
Over 4 (1.2) to 8 (2.5)	Over 8 (2.5) to 16 (5.0)	2.875 (73.0)	5.79 (8.62)	3 (76.2)	5.78 (8.60)	2.875 (73.0)	4.64 (6.91)
Over 8 (2.5) to 12 (3.6)	Over 16 (5.0) to 24 (7.4)	3.5 (89.0)	7.58 (11.28)	3 (76.2)	8.80 (13.10)	3.5 (89)	5.707 (8.49)

• The 3 1/2 x 3 1/2 (89.0 x 89.0) roll formed section as detailed may be used as gate posts for single gate up to 6' (1.8 m) and double gate up to 12' (3.6 m).

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

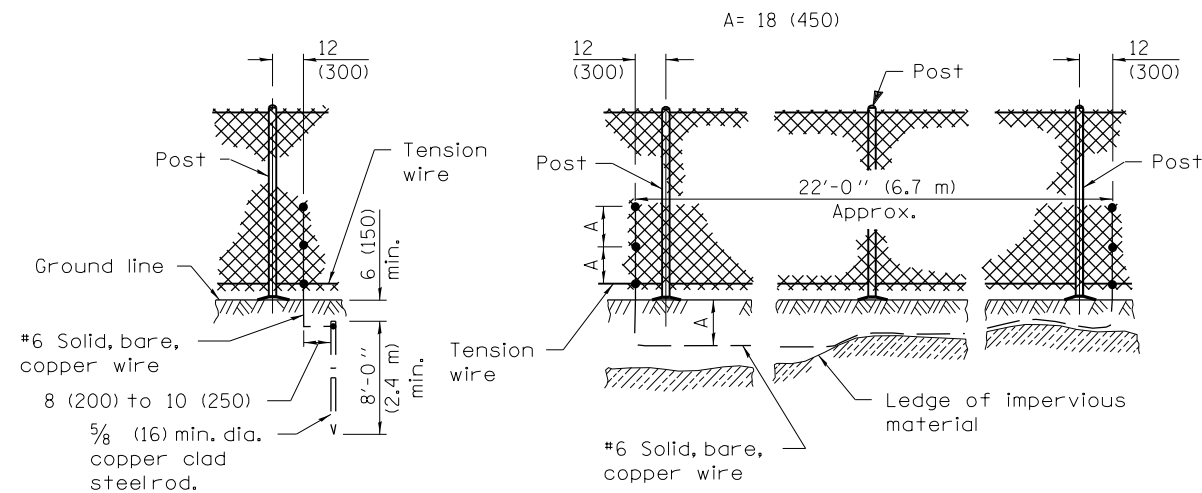
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

**CHAIN LINK FENCE**

(Sheet 2 of 3)

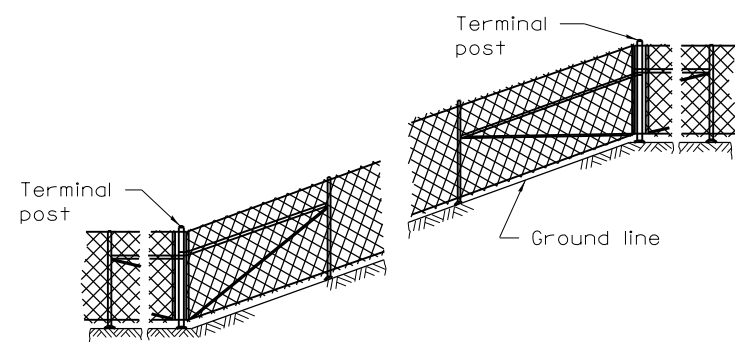
**STANDARD 664001-02**



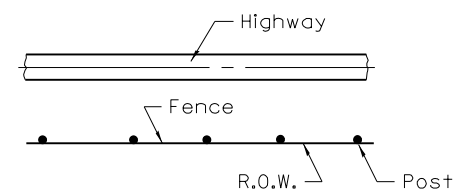
**STANDARD GROUND**

**COUNTERPOISE GROUND (ALTERNATE)**

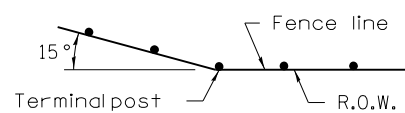
**PROTECTIVE ELECTRICAL GROUNDS**



**INSTALLATION ON SLOPES**



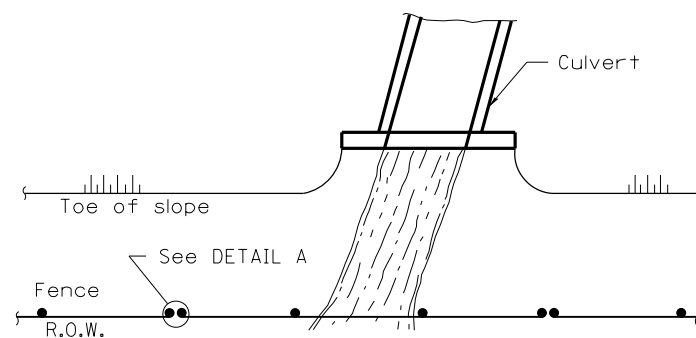
**PLAN**



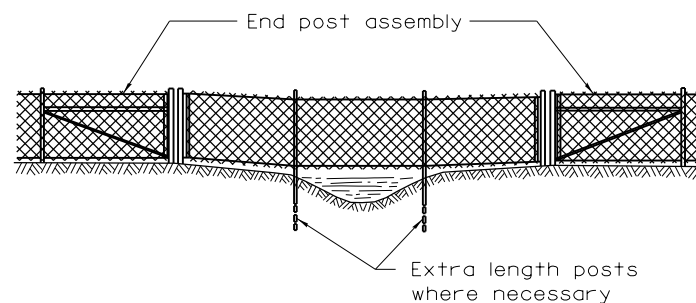
When fence line has a change in direction of 15° or more, a terminal post shall be placed as shown above.

Where angle is less than 15° and existing conditions require a terminal post, they shall be placed as directed by the Engineer.

**INSTALLATION AT CORNERS**

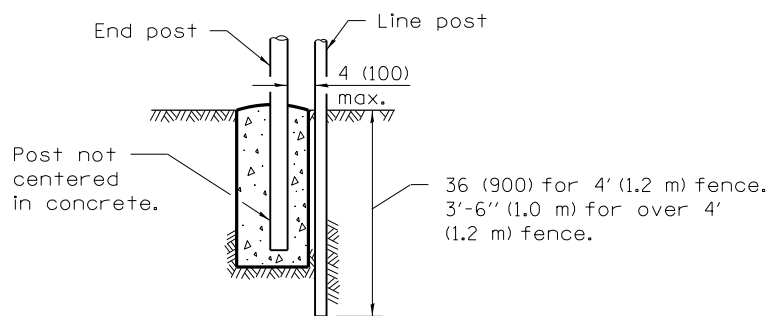


**PLAN AT STREAM CROSSING**

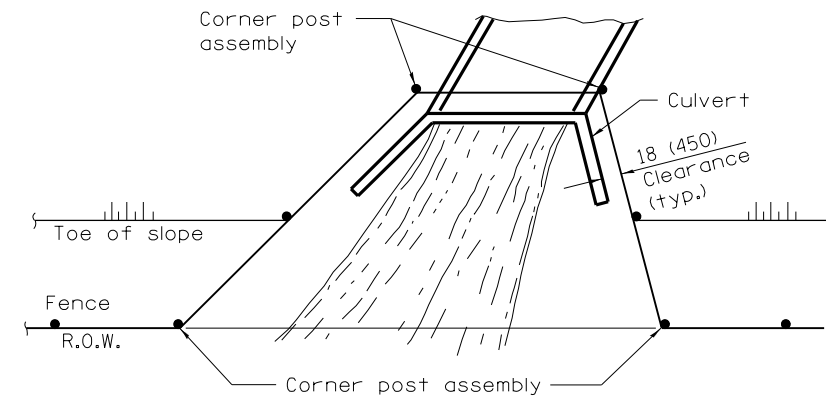


**ELEVATION INSTALLATION OVER STREAM**

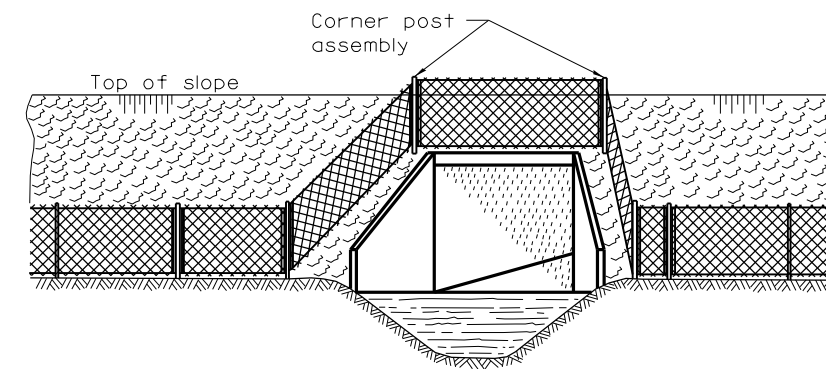
The chain link fabric shall be replaced by barbed wire strands at 12 (300) maximum centers between the double posts shown on DETAIL A when shown on the plans.



**DETAIL A**



**PLAN AT HEADWALL**



**ELEVATION INSTALLATION AROUND HEADWALL**

When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the Engineer shall be used.

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

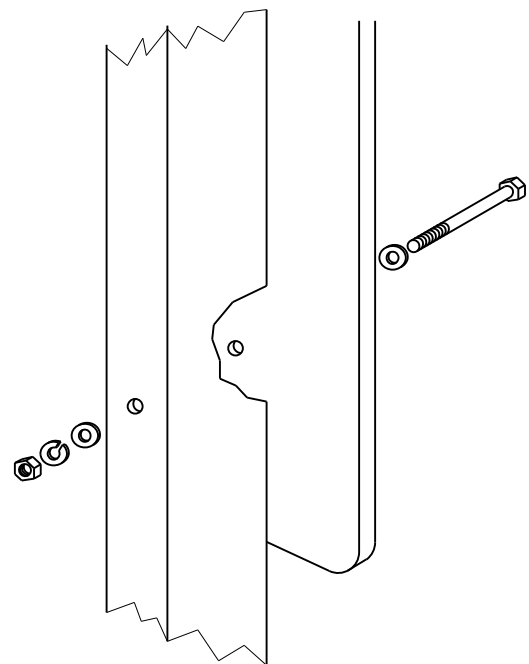
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

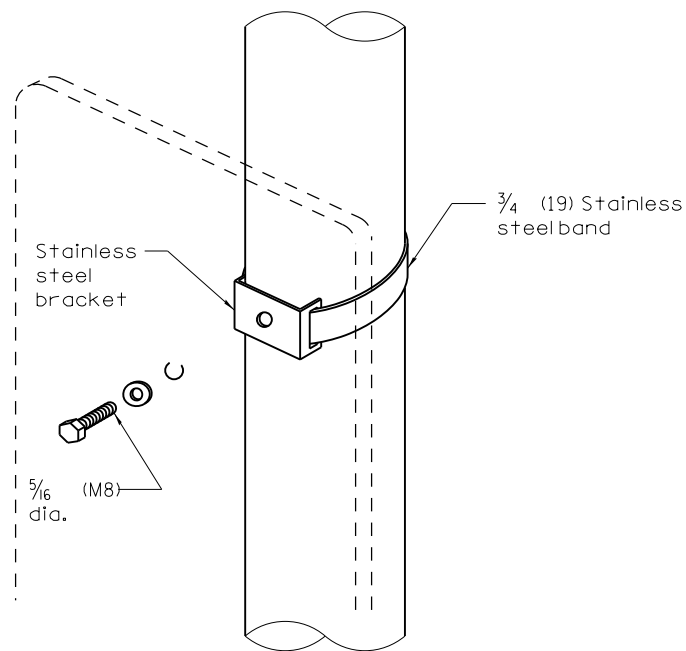
**CHAIN LINK FENCE**

(Sheet 3 of 3)

**STANDARD 664001-02**

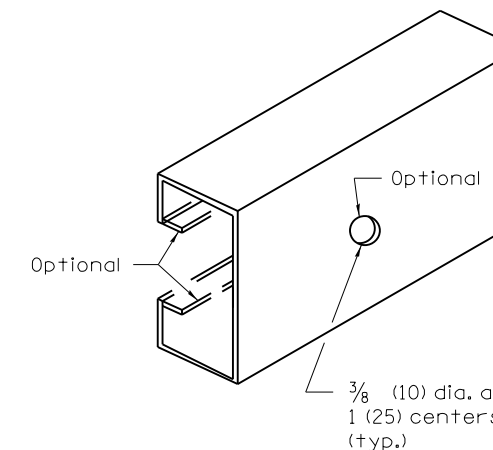
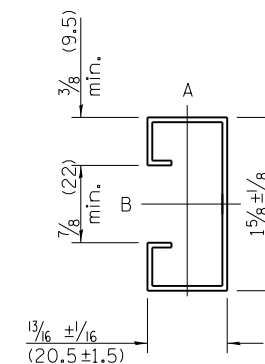


Sign panel 36 (900) wide or less

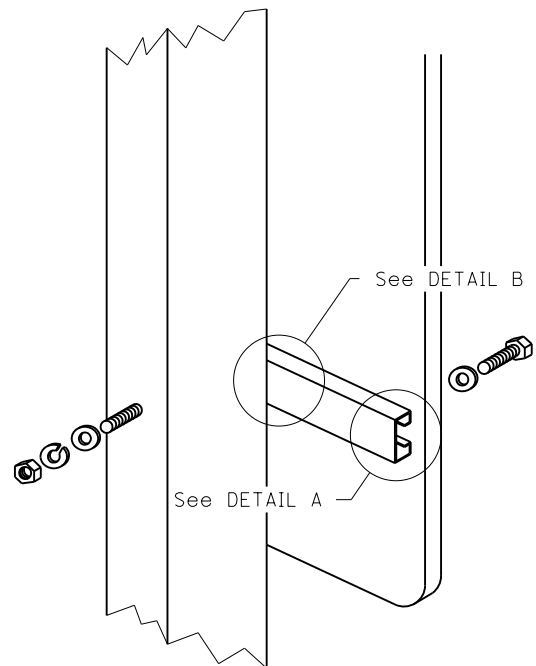


Sign panel 36 (900) wide or less

Section modulus (minimum)	Axis A	Axis B
Steel	0.050 in. <sup>3</sup> (819 mm <sup>3</sup> )	0.105 in. <sup>3</sup> (1720 mm <sup>3</sup> )
Aluminum	0.150 in. <sup>3</sup> (2458 mm <sup>3</sup> )	0.315 in. <sup>3</sup> (5162 mm <sup>3</sup> )

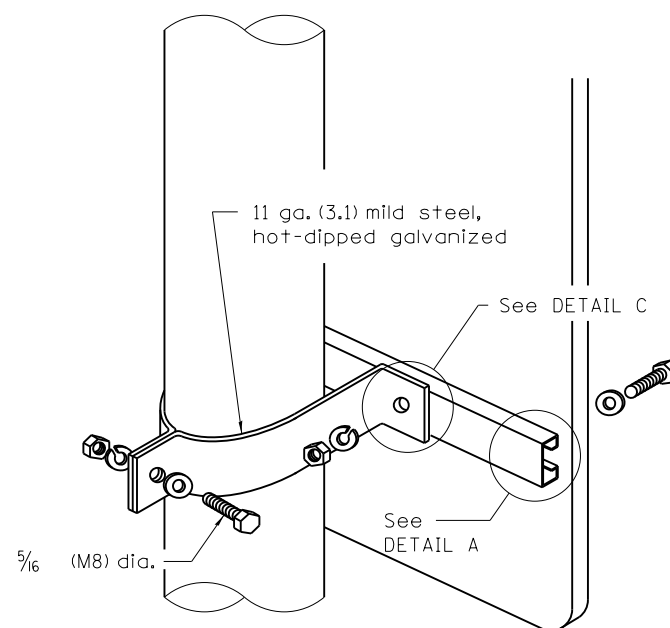


**SUPPORTING CHANNEL DETAILS**



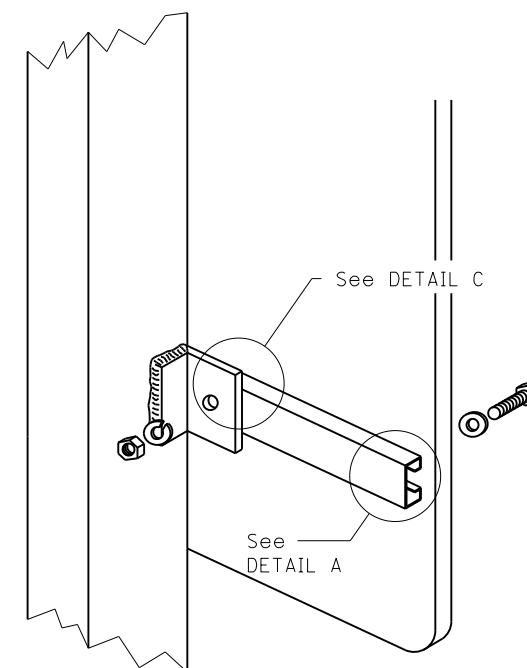
Sign panel over 36 (900) wide

**WOOD OR TELESCOPING STEEL POSTS**

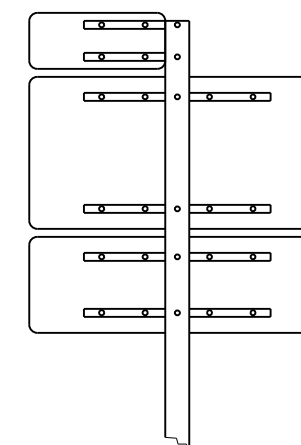


Sign panel over 36 (900) wide

**LIGHT OR SIGNAL STANDARDS**

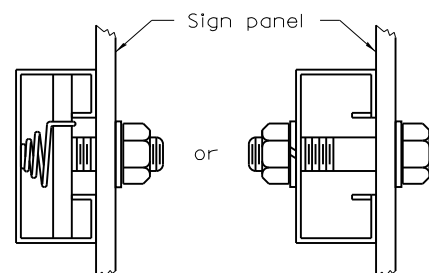


**ROUTE MARKER ASSEMBLY**

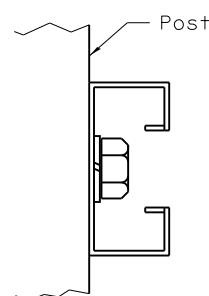


**BREAKAWAY STEEL TUBING POSTS**

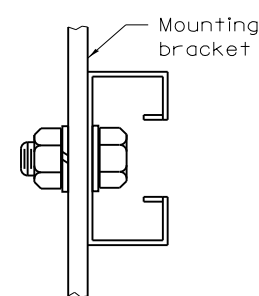
(All sign panel sizes)



**DETAIL A**



**DETAIL B**



**DETAIL C**

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 2319-6.

**SIGN PANEL MOUNTING DETAILS**

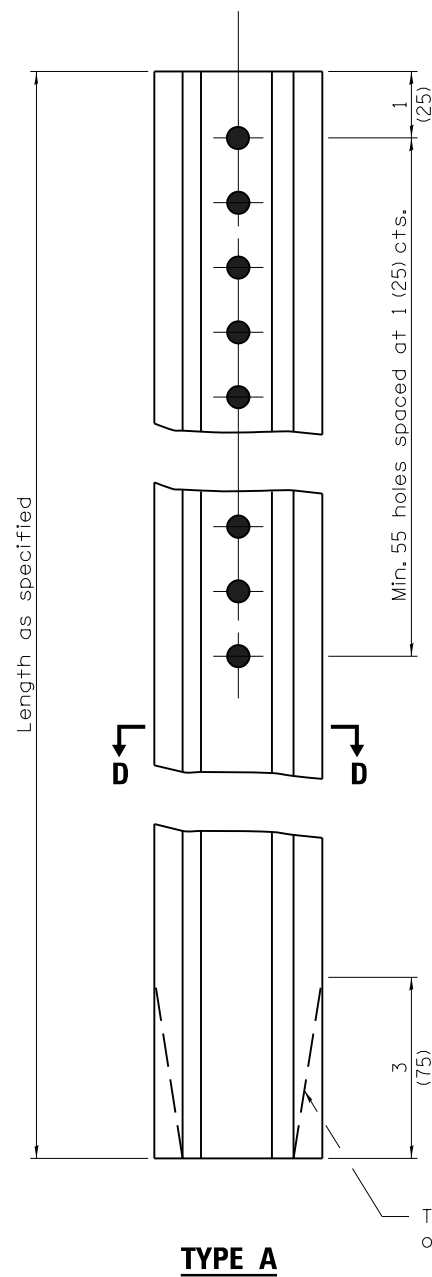
**STANDARD 720001-01**

Illinois Department of Transportation

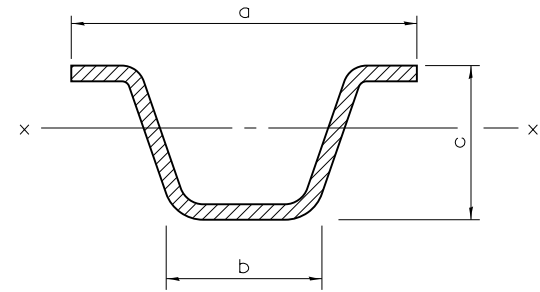
APPROVED January 1, 2009  
*[Signature]*  
 ENGINEER OF OPERATIONS

APPROVED January 1, 2009  
*[Signature]*  
 ENGINEER OF DESIGN AND ENVIRONMENT

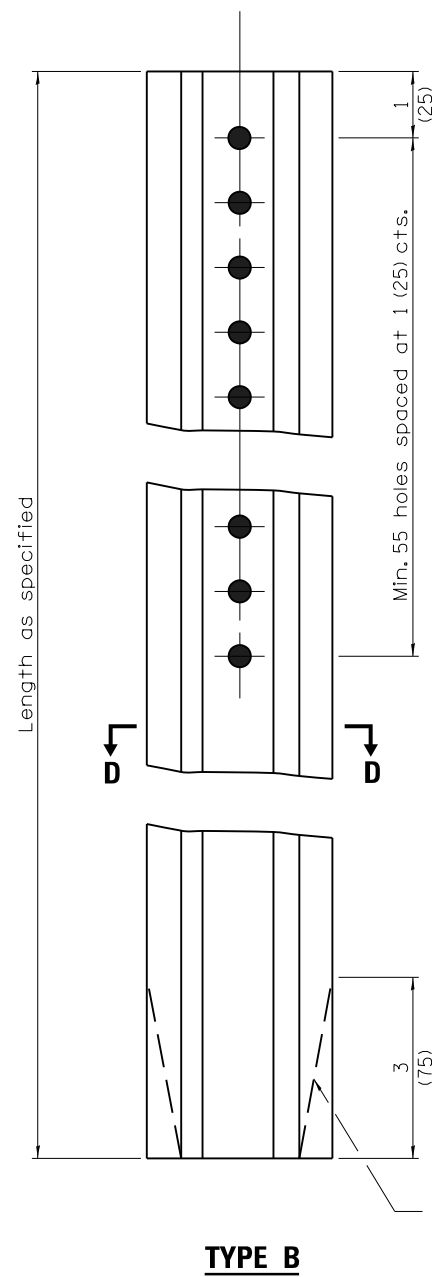
ISSUED 1-1-97



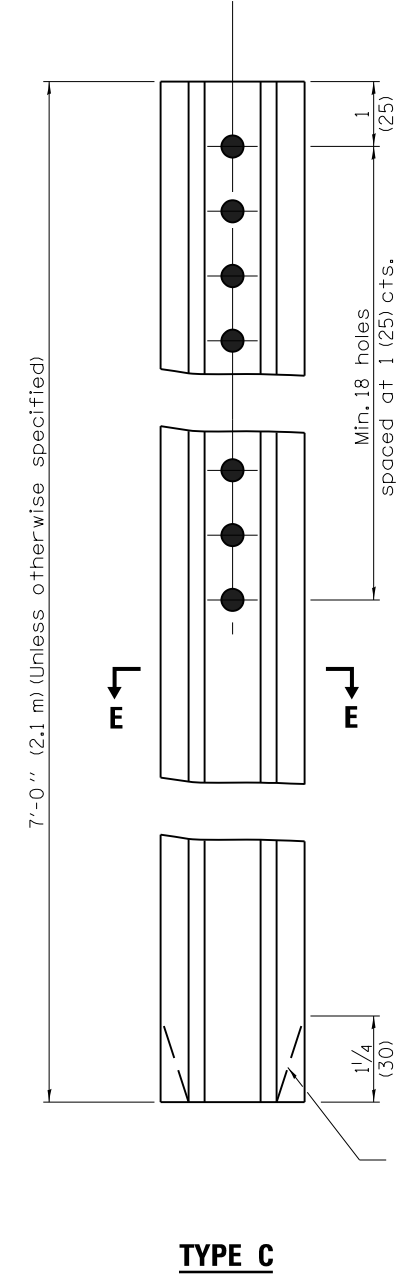
**TYPE A**



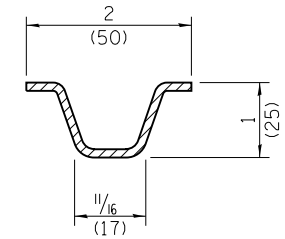
**SECTION D-D**



**TYPE B**



**TYPE C**



**SECTION E-E**

Steel - 1.12 lbs./ft. (1.67 kg/m)

		a	b	c	Sx-x in. <sup>3</sup> (mm <sup>3</sup> )	lbs./ft. (kg/m)
TYPE A	Steel	3/16 (78)	1/4 (32)	1/8 (37)	0.223 (3,654)	2.00 (2.98)
	Aluminum	3/2 (89)	1 5/8 (41)	1 7/8 (48)	0.435 (7,128)	0.90 (1.34)
TYPE B	Steel	3/8 (81)	1/4 (32)	1/2 (38)	0.341 (5,588)	3.00 (4.46)
	Aluminum	4 5/8 (118)	2 1/4 (57)	2 3/8 (60)	0.888 (14,552)	1.30 (1.93)

**GENERAL NOTES**

Dimensions shown for cross sections are minimum.

All holes are 3/8 (10).

Sx-x is the minimum section modulus about the x-x axis of the post as shown. For posts in which holes are punched or drilled for more than half their length, Sx-x shall be computed for the net section.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

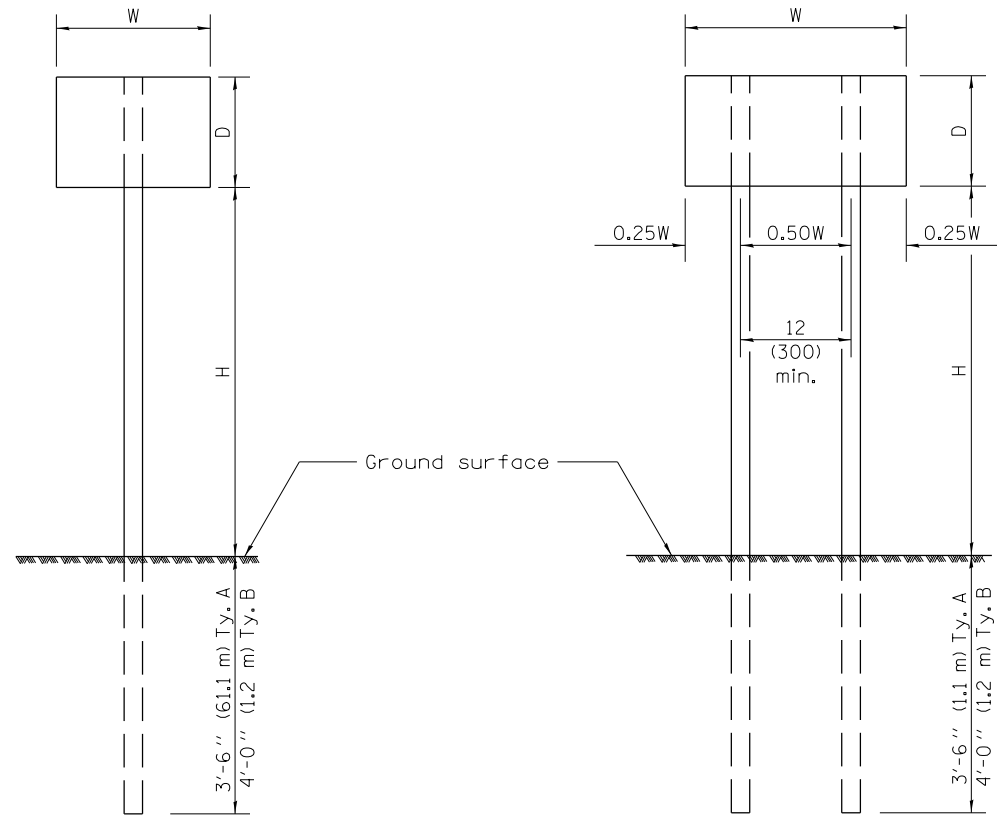
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 2350-4.

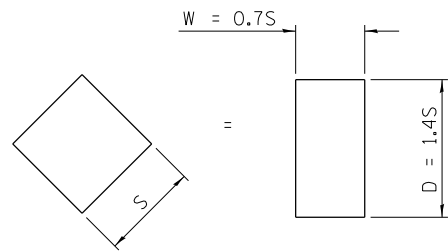
**METAL POSTS FOR SIGNS, MARKERS & DELINEATORS**

**STANDARD 720011-01**



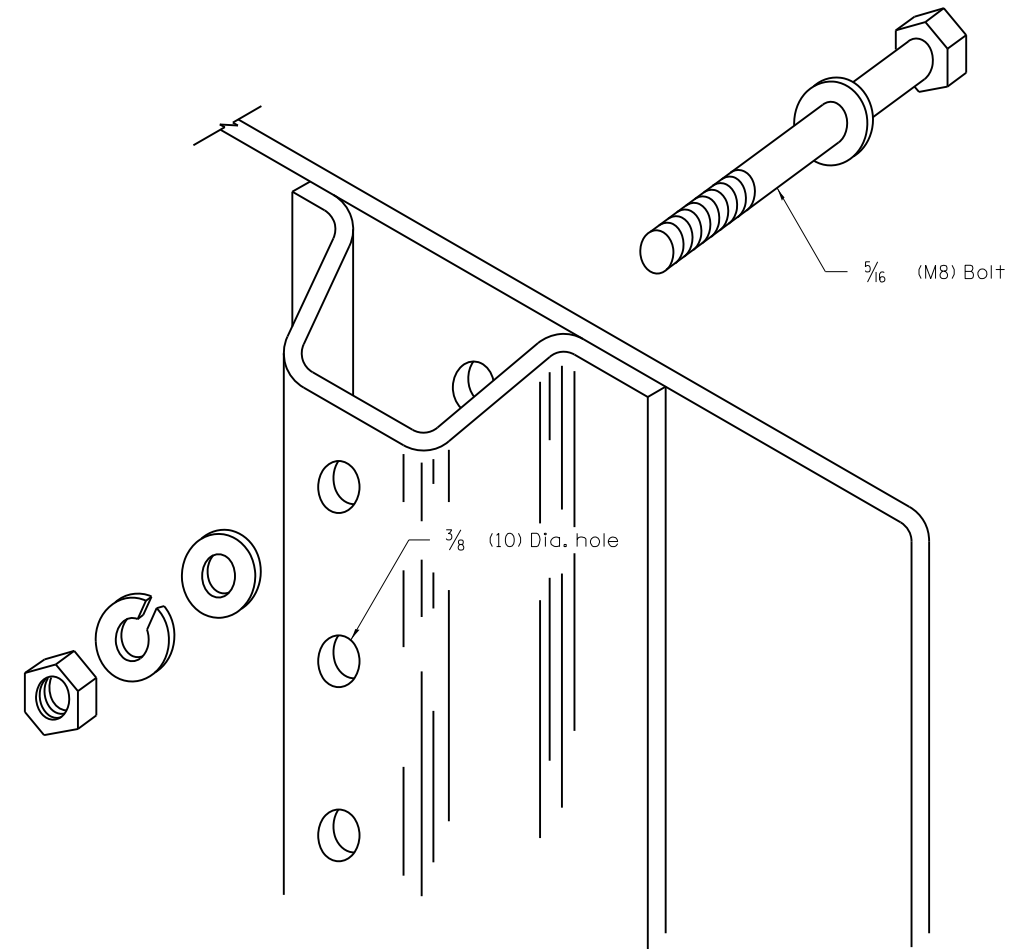
**ONE POST INSTALLATION**

**TWO POST INSTALLATION**



For diamond shaped sign with side S as shown, use required post size for a sign with  $W = 0.7S$  and  $D = 1.4S$ .

SIGN DEPTH (D)	H	NO. AND TYPE OF POST FOR SIGN WIDTH (W)				
		12 (300)	18 (450)	24 (600)	30 (750)	36 (900)
18 (450)	5'-0" (1.5 m)	A	A	A	A	A
	5'-6" (1.7 m)	A	A	A	A	A
	6'-0" (1.8 m)	A	A	A	A	B
	6'-6" (2.0 m)	A	A	A	A	B
	7'-0" (2.1 m)	A	A	A	A	B
	7'-6" (2.3 m)	A	A	A	A	B
	8'-0" (2.4 m)	A	A	A	A	B
	8'-6" (2.6 m)	A	A	A	B	B
	9'-0" (2.7 m)	A	A	A	B	B
24 (600)	5'-0" (1.5 m)	A	A	A	A	B
	5'-6" (1.7 m)	A	A	A	A	B
	6'-0" (1.8 m)	A	A	A	B	B
	6'-6" (2.0 m)	A	A	A	B	B
	7'-0" (2.1 m)	A	A	A	B	B
	7'-6" (2.3 m)	A	A	A	B	B
	8'-0" (2.4 m)	A	A	A	B	2A
	8'-6" (2.6 m)	A	A	B	B	2A
	9'-0" (2.7 m)	A	A	B	B	2A
30 (750)	5'-0" (1.5 m)	A	A	A	B	B
	5'-6" (1.7 m)	A	A	A	B	2A
	6'-0" (1.8 m)	A	A	A	B	2A
	6'-6" (2.0 m)	A	A	A	B	2A
	7'-0" (2.1 m)	A	A	B	B	2A
	7'-6" (2.3 m)	A	A	B	B	2A
	8'-0" (2.4 m)	A	A	B	B	2A
	8'-6" (2.6 m)	A	A	B	2A	2A
	9'-0" (2.7 m)	A	A	B	2A	2A
36 (900)	5'-0" (1.5 m)	A	A	B	B	2A
	5'-6" (1.7 m)	A	A	B	B	2A
	6'-0" (1.8 m)	A	A	B	B	2A
	6'-6" (2.0 m)	A	A	B	2A	2A
	7'-0" (2.1 m)	A	A	B	2A	2A
	7'-6" (2.3 m)	A	A	B	2A	2A
	8'-0" (2.4 m)	A	B	B	2A	2A
	8'-6" (2.6 m)	A	B	B	2A	2B
	9'-0" (2.7 m)	A	B	2A	2A	2B
4'-0" (1.2 m)	5'-0" (1.5 m)	A	A	B	2A	2A
	5'-6" (1.7 m)	A	B	B	2A	2A
	6'-0" (1.8 m)	A	B	B	2A	2A
	6'-6" (2.0 m)	A	B	2A	2A	2B
	7'-0" (2.1 m)	A	B	2A	2A	2B
	7'-6" (2.3 m)	A	B	2A	2B	2B
	8'-0" (2.4 m)	A	B	2A	2B	2B
	8'-6" (2.6 m)	B	B	2B	2B	2B
	9'-0" (2.7 m)	B	2A	2B	2B	2B



**DETAIL OF MOUNTING SIGN TO POST**

NOTE: Minimum of 2 bolts per post required.

**GENERAL NOTES**

DESIGN: Current AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

LOADING: for 60 mph (95 km/h) wind velocity with 30% gust factor, normal to sign.

SOIL PRESSURE: Minimum allowable soil pressure 1.25 tsf (120 kPa).

See Standard 720011 for details of Types A and B posts.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 2363-2.

**APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)**

**STANDARD 729001-01**

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

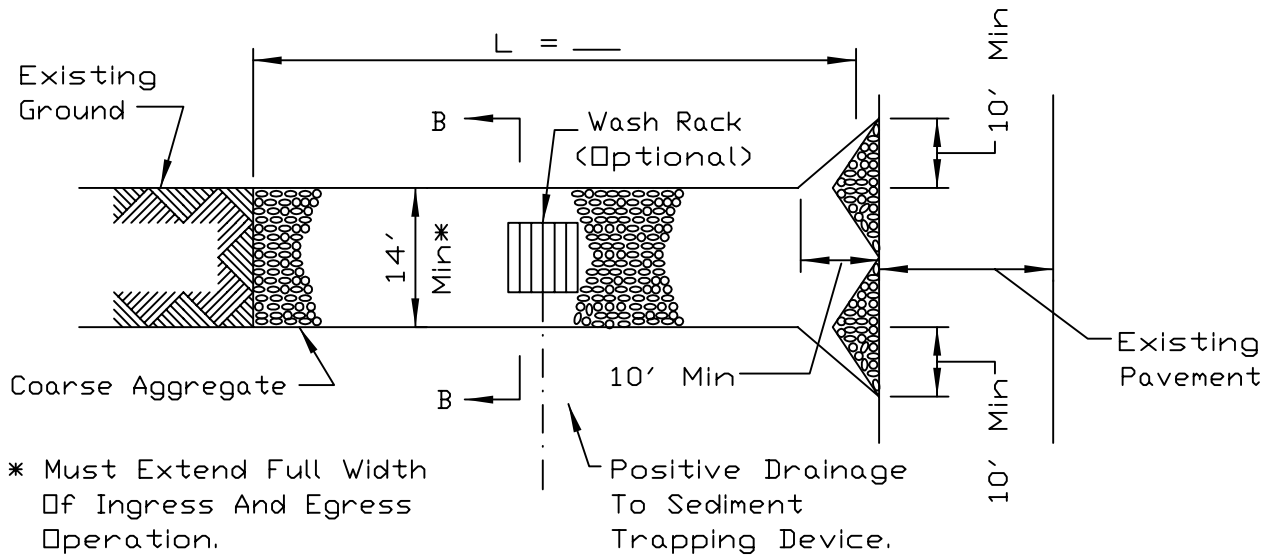
APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

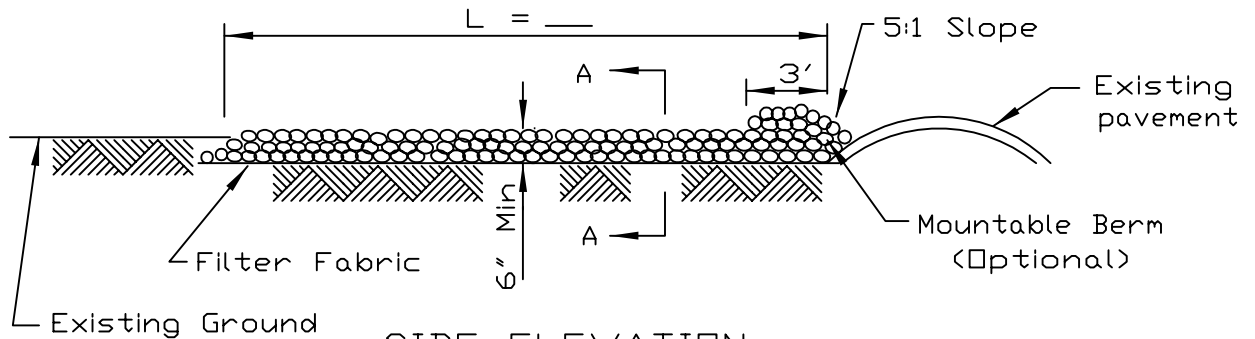
ISSUED 1-1-97

**STABILIZED CONSTRUCTION ENTRANCE PLAN**

# STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN VIEW



SIDE ELEVATION

**NOTES:**

1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

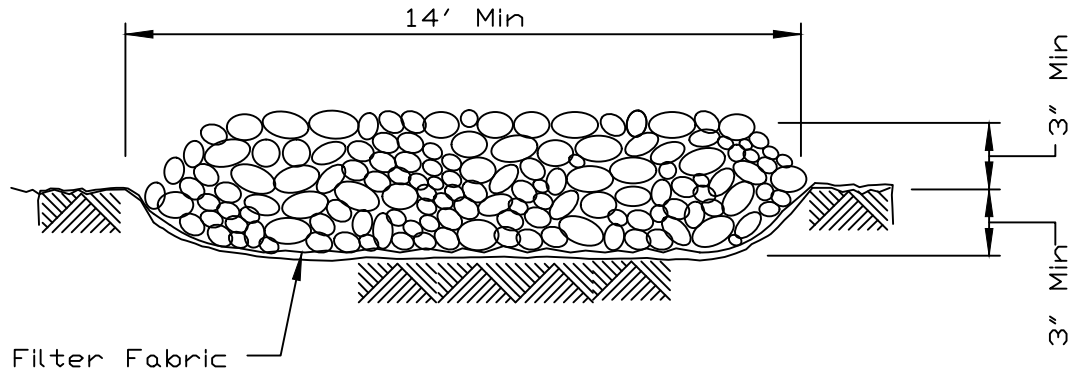
REFERENCE	
Project	_____
Designed	_____ Date _____
Checked	_____ Date _____
Approved	_____ Date _____



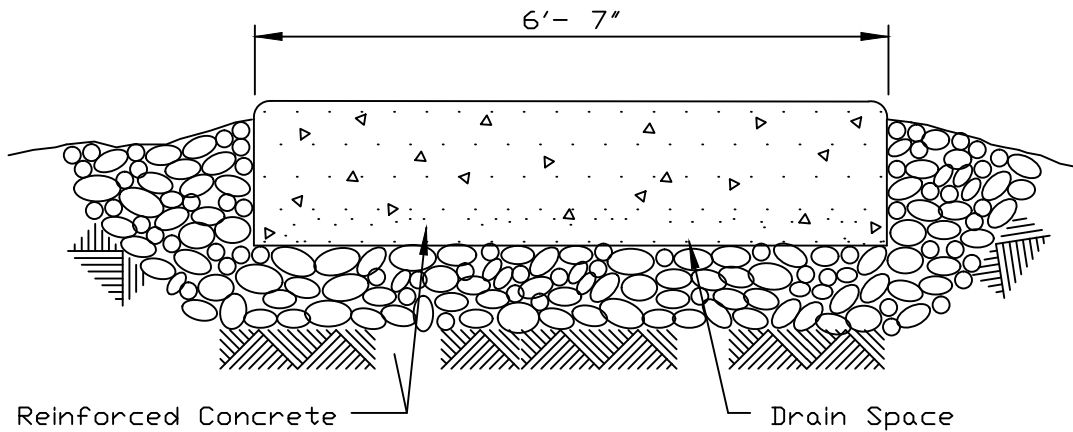
STANDARD DWG. NO.
IL-630
SHEET 1 OF 2
DATE 8-18-94



# STABILIZED CONSTRUCTION ENTRANCE PLAN



SECTION A-A



SECTION B-B

REFERENCE  
 Project \_\_\_\_\_  
 Designed \_\_\_\_\_ Date \_\_\_\_\_  
 Checked \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Date \_\_\_\_\_



STANDARD DWG. NO.  
 IL-630  
 SHEET 2 OF 2  
 DATE 8-18-94