

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 and the Chief Procurement Officer that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Authorization to Bid or Not for Bid Report** will indicate the reason for denial.

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

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

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

The Internet is the Department's primary way of doing business. The subscription server e-mails are an added courtesy the Department provides. It is suggested that bidders check IDOT's website at <http://www.idot.illinois.gov/doing-business/procurements/construction-services/construction-bulletins/transportation-bulletin/index> before submitting final bid information.

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

BID SUBMITTAL GUIDELINES AND CHECKLIST

- All pages should be single sided.
- Use the Cover Page that is provided in the Bid Proposal (posted on the IDOT Web Site) as the first page of your submitted bid. It has the Item number in large bold type in the upper left-hand corner of the page.
- Do not use report covers, presentation folders or special bindings and do not staple multiple times on left side like a book. Use only 1 staple in the upper left hand corner.
- Do not include any certificates of eligibility, your authorization to bid, Addendum Letters or affidavit of availability.
- Do not include the Subcontractor Documentation with your bid (pages 30-38).
- Use the envelope cover sheet (provided with the proposal) as the cover for the proposal envelope.
- Do not rely on overnight services to deliver your proposal prior to 10 AM on letting day. It will not be read if it is delivered after 10 AM.
- Do not submit your Substance Abuse Prevention Program (SAPP) with your bid. If you are awarded the contract this form is to be submitted to the Division Construction Engineer at the pre-construction conference.

BID SUBMITTAL CHECKLIST

Cover page (the sheet that has the item number on it) – This should be the first page of your proposal, **followed by your bid (the Pay Items)**. If you are using special software or CBID to generate your schedule of prices, do not include the blank schedule of prices that came with the proposal package.

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

After Page 4 – Insert the following documents: Cost Adjustments for Steel, Bituminous, and Fuel (if applicable) and the Contractor Letter of Assent (if applicable). The general rule should be, if you don’t know where it goes, put it after page 4.

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

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

Page 11 (Paragraph L) – A copy of your State Board of Elections certificate of registration is no longer required with your bid.

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

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

Pages 14-17 (Form A) - One Form A (4 pages) is required for each applicable person in your company. Copies of the Forms can be used and only need to be changed when the financial information changes. The certification signature and date must be original for each letting. **Do not staple the forms together.** If you answered “NO” to all of the questions in Paragraph C (page 12), complete the first section (page 14) with your company information and then sign and date the Not Applicable statement on page 17.

Page 18 (Form B) - If you check “YES” to having other current or pending contracts it is acceptable to use the phrase, “See Affidavit of Availability on file”. **Ownership Certification** (at the bottom of the page) – Check N/A if the Form A you submitted accounts for 100 percent of the company ownership. Check YES if any percentage of ownership falls outside of the parameters that require reporting on the Form A. Checking NO indicates that the Form A you submitted is not correct and you will be required to submit a revised Form A.

Pages 20-21 (Workforce Projection) - Be sure to include the Duration of the Project. It is acceptable to use the phrase “Per Contract Specifications”.

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

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

7A

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 January 15, 2016

NOTICE TO PROSPECTIVE BIDDERS

This proposal can be used for bidding purposes by only those companies that request and receive written AUTHORIZATION TO BID from IDOT's Central Bureau of Construction. BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL

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



Illinois Department of Transportation
DIVISION OF AERONAUTICS

Contract No. MS008
Mt. Sterling Municipal Airport
Mt. Sterling, Illinois
Brown County
Illinois Project No. I63-4325
SBG Project No. 3-17-SBGP-XX

For engineering information, contact Kevin Lightfoot, P.E. of Hanson Professional Services, Inc. at (217) 747-9433.

FAA rules prohibit the use of escalation clauses for materials. Therefore, the Division of Aeronautics cannot offer any material cost adjustment provisions for projects that utilize Federal funds.

PLEASE MARK THE APPROPRIATE BOX BELOW:

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



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____

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

**Contract No. MS008
Mt. Sterling Municipal Airport
Mt. Sterling, Illinois
Brown County
Illinois Project No. I63-4325
SBG Project No. 3-17-SBGP-XX**

Remove the Existing Electrical Vault and Construct a New Electrical Vault; Remove the Existing PLASI Units and Install New PAPI

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

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

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

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 will fail to execute contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty will become the property of the State of Illinois, and shall be considered as payment of damages due to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise, the bid bond will become void or the proposal guaranty check will 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

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices will govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **AUTHORITY TO DO BUSINESS IN ILLINOIS.** Section 20-43 of the Illinois Procurement Code (the Code) (30 ILCS 500/20-43) provides that a person (other than an individual acting as a sole proprietor) must be a legal entity authorized to transact business or conduct affairs in the State of Illinois prior to submitting the bid.
9. **EXECUTION OF CONTRACT.** The Department of Transportation will, in accordance with the rules governing Department procurements, execute the contract and shall be the sole entity having the authority to accept performance and make payments under the contract. Execution of the contract by the Chief Procurement Officer (CPO) or the State Purchasing Officer (SPO) is for approval of the procurement process and execution of the contract by the Department. Neither the CPO nor the SPO shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Code
10. **The services of a subcontractor will be used.**
- Check box Yes
- Check box No

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

STATE JOB #- - - -

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - MS008

ECMS002 DTGECM03 ECMR003 PAGE 1
 RUN DATE - 11/30/15
 RUN TIME - 223556

COUNTY NAME	CODE	DIST	AIRPORT NAME	FED PROJECT	ILL PROJECT
BROWN	009	06	MT. STERLING MUNICIPAL	3-17-SBGP-XX	I6-3 -4325

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR108082	1/C #2 XLP-USE	L.F.	3,300.000 X			=	
AR108086	1/C #6 XLP-USE	L.F.	4,200.000 X			=	
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	230.000 X			=	
AR108258	2/C #8 5 KV UG CABLE IN UD	L.F.	7,721.000 X			=	
AR109110	ERECT PREFABRICATED VAULT	L.S.	1.000 X			=	
AR109200	INSTALL ELECTRICAL EQUIPMENT	L.S.	1.000 X			=	
AR109901	REMOVE ELECTRICAL VAULT	L.S.	1.000 X			=	
AR110013	3" DIRECTIONAL BORE	L.F.	550.000 X			=	
AR110202	2" PVC DUCT, DIRECT BURY	L.F.	360.000 X			=	
AR110203	3" PVC DUCT, DIRECT BURY	L.F.	1,170.000 X			=	
AR110504	4-WAY CONCRETE ENCASED DUCT	L.F.	530.000 X			=	
AR110610	ELECTRICAL HANDHOLE	EACH	5.000 X			=	
AR110710	ELECTRICAL MANHOLE	EACH	4.000 X			=	
AR125615	PAPI (L-880 SYSTEM)	EACH	2.000 X			=	
AR125910	REMOVE PLASI	EACH	2.000 X			=	

MT. STERLING MUNICIPAL
BROWN

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - MS008

ECMS002 DTGECM03 ECMR003 PAGE 2
RUN DATE - 11/30/15
RUN TIME - 223556

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1.000 X		=		
AR150520	MOBILIZATION	L.S.	1.000 X		=		
AR162605	CLASS E GATE-5'	EACH	1.000 X		=		
AR162612	CLASS E GATE-12'	EACH	1.000 X		=		
				TOTAL		\$	

NOTE:

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

RETURN WITH BID

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

I. GENERAL

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

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. Except as otherwise required in subsection III, paragraphs J-M, by execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances 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 CPO to void the contract, and may result in the suspension or debarment of the bidder or subcontractor. If a false certification is made by a subcontractor, the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the States' request after a finding that the subcontractor's certification was false.

I acknowledge, understand and accept these terms and conditions.

II. ASSURANCES

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

A. Conflicts of Interest

Section 50-13. Conflicts of Interest.

(a) Prohibition. It is unlawful for any person holding an elective office in this State, holding a seat in the General Assembly, or appointed to or employed in any of the offices or agencies of state government and who receives compensation for such employment in excess of 60% of the salary of the Governor of the State of Illinois, or who is an officer or employee of the Capital Development Board or the Illinois 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 calendar days after the officer, member, or employee takes office or is employed. The current salary of the Governor is \$177,412.00. Sixty percent of the salary is \$106,447.20.

RETURN WITH BID

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

B. Negotiations

Section 50-15. Negotiations.

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

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

C. Inducements

Section 50-25. Inducement.

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

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

D. Revolving Door Prohibition

Section 50-30. Revolving door prohibition.

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

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

E. Reporting Anticompetitive Practices

Section 50-40. Reporting anticompetitive practices.

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

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

F. Confidentiality

Section 50-45. Confidentiality.

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

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

RETURN WITH BID

G. Insider Information

Section 50-50. Insider information.

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

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

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

III. CERTIFICATIONS

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

A. Bribery

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50-5.

B. Felons

Section 50-10. Felons.

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

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

RETURN WITH BID

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

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

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

E. Section 42 of the Environmental Protection Act

Section 50-14 Environmental Protection Act violations.

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

F. Educational Loan

Section 3 of the Educational Loan Default Act, 5 ILCS 385/3

Pursuant to the Educational Loan Default Act, no State agency shall contract with an individual for goods or services if that individual is in default on an educational loan.

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

G. Bid-Rigging/Bid Rotating

Section 33E-11 of the Criminal Code of 2012, 720 ILCS 5/33E-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.

(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.

RETURN WITH BID

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

H. International Anti-Boycott

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

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

I. Drug Free Workplace

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

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

J. Disclosure of Business Operations in Iran

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

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

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

Failure to make the disclosure required by the Code may cause the bid, offer or proposal to be considered not responsive. The disclosure will be considered when evaluating the bid, 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 on the attached document.

RETURN WITH BID

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

In accordance with the provisions of Section 30-22 (6) of the Code, the bidder certifies that it is a participant, either as an individual or as part of a group program, in the approved apprenticeship and training programs applicable to each type of work or craft that the bidder will perform with its own forces. The bidder further certifies for work that will be performed by subcontract that each of its subcontractors submitted for approval either (a) is, at the time of such bid, participating in an approved, applicable apprenticeship and training program; or (b) will, prior to commencement of performance of work pursuant to this contract, begin participation in an approved apprenticeship and training program applicable to the work of the subcontract. The Department, at any time before or after award, may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. Applicable apprenticeship and training programs are those that have been approved and registered with the United States Department of Labor. The bidder shall list in the space below, the official name of the program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's forces. Types of work or craft work that will be subcontracted shall be included and listed as 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.**

Additionally, Section 30-22 of the Code requires that the bidder certify that an Illinois office be maintained as the primary place of employment for persons employed for this contract.

_____ **NA-FEDERAL** _____

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

RETURN WITH BID

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

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

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

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

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

M. Lobbyist Disclosure

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

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

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

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

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

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

Or

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

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

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

RETURN WITH BID

IV. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any 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 individual making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each individual making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on Form A must be signed and dated by an individual that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES _____ NO _____
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES _____ NO _____
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the bidding entity's or parent entity's distributive income? (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 individual per bid even if a specific individual would require a yes answer to more than one question.)

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

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

RETURN WITH BID

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

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

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

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

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

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

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

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

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

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

DISCLOSURE OF FINANCIAL INFORMATION

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

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

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

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

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

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes____ No____

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

(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 _____

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

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

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

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

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

RETURN WITH BID

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

(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections Yes____ No____

(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes____ No____

3. Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH BID

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

Completed by: _____ Date _____
Signature of Individual or Authorized 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 Code.

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Procurement Related Information Disclosure

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

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for all bids.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature of Authorized Representative, Date

OWNERSHIP CERTIFICATION

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

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

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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

The following requirements of the Illinois Department of Human Rights' Act 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 Title 44, Illinois Administrative Code, Section 750.120. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

RETURN WITH BID

**Contract No. MS008
Mt. Sterling Municipal Airport
Mt. Sterling, Illinois
Brown County
Illinois Project No. I63-4325
SBG Project No. 3-17-SBGP-XX**

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____

Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.

Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.

Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.

Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

RETURN WITH BID

ADDITIONAL FEDERAL REQUIREMENTS

In addition to the Required Contract Provisions for Federally funded airport construction contracts, all bidders make the following certifications.

A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.

B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY

1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?
Yes____ No____

2. If 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____

RETURN WITH BID

**Contract No. MS008
Mt. Sterling Municipal Airport
Mt. Sterling, Illinois
Brown County
Illinois Project No. I63-4325
SBG Project No. 3-17-SBGP-XX**

PROPOSAL SIGNATURE SHEET

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

Firm Name _____

(IF AN INDIVIDUAL) Signature of Owner _____

Business Address _____

Firm Name _____

By _____

(IF A CO-PARTNERSHIP) Business Address _____

Name and Address of All Members of the Firm:

Corporate Name _____

By _____

Signature of Authorized Representative

(IF A CORPORATION) _____

Typed or printed name and title of Authorized Representative

(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 _____

Signature of Authorized Representative

(IF A JOINT VENTURE) _____

Typed or printed name and title of Authorized Representative

Attest _____

Signature

Business Address _____

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



Sponsor _____ Item No. _____

IL Proj. No. _____ SBG Pr. 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 Guaranty 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 _____



**Division of Highways
Proposal Bid Bond
(Return with Bid)**



Item No. _____

Letting Date _____

KNOW ALL PERSONS BY THESE PRESENTS, _____

as PRINCIPAL, _____

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

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

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

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

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

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

(Company Name)

(Company Name)

By _____
(Signature and Title)

By _____
(Signature of Attorney-in-Fact)

Notary for PRINCIPAL

STATE OF _____
COUNTY OF _____

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

Notary for SURETY

STATE OF _____
COUNTY OF _____

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

(Seal) _____
(Signature of Notary Public)

(Seal) _____
(Signature of Notary Public)

(Date Commission Expires)

(Date Commission Expires)

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

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

PROPOSAL ENVELOPE



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

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

**Contract No. MS008
Mt. Sterling Municipal Airport
Mt. Sterling, Illinois
Brown County
Illinois Project No. I63-4325
SBG Project No. 3-17-SBGP-XX**



Illinois Department of Transportation

SUBCONTRACTOR DOCUMENTATION

Public Acts 96-0795, 96-0920, and 97-0895 enacted substantial changes to the provisions of the Code (30 ILCS 500). Among the changes are provisions affecting subcontractors. The Contractor awarded this contract will be required as a material condition of the contract to implement and enforce the contract requirements applicable to subcontractors that entered into a contractual agreement with a total value of \$50,000 or more with a person or entity who has a contract subject to the Code and approved in accordance with Section 80-01 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 Illinois Department of Transportation's CPO upon request within 15 calendar days after execution of the subcontract.

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

RETURN WITH SUBCONTRACT

STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

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

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

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

A. Bribery

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50-5.

B. Felons

Section 50-10. Felons.

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

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

RETURN WITH SUBCONTRACT

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

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

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

E. Section 42 of the Environmental Protection Act

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

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

<hr/>		
Name of Subcontracting Company		
<hr/>		<hr/>
Authorized Officer		Date

RETURN WITH SUBCONTRACT

SUBCONTRACTOR DISCLOSURES

I. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the subcontracting entity or its parent entity, whichever is less, unless the subcontractor is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each individual making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each individual making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the subcontractor is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual or entity holding any ownership share that is in excess of 5%. If a subcontractor is not subject to Federal 10K reporting, the subcontractor must determine if any individuals are required by law to complete a financial disclosure form. To do this, the subcontractor should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on the second page of Form A must be signed and dated by an individual that is authorized to execute contracts for the subcontracting company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity?
YES _____ NO _____
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES _____ NO _____
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the subcontracting entity's or parent entity's distributive income? (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 individual per subcontract even if a specific individual would require a yes answer to more than one question.)

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

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

RETURN WITH SUBCONTRACT

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

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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

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

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

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form.

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

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the SUBCONTRACTOR (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than 60% of the annual salary of the Governor.

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

(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 _____

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

RETURN WITH SUBCONTRACT

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

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

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

3. Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH SUBCONTRACT

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

Completed by:

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 Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature box with fields: Signature of Authorized Officer, Date

OWNERSHIP CERTIFICATION

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

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

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



NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation. Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). Paper-based bids are to be submitted to the Chief Procurement Officer for the Department of Transportation in care of the Chief Contracts Official at the Harry R. Hanley Building, 2300 South Dirksen Parkway in Springfield, Illinois until 10:00 a.m., January 15, 2016. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after 10:00 a.m.

2. **DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. MS008
Mt. Sterling Municipal Airport
Mt. Sterling, Illinois
Brown County
Illinois Project No. I63-4325
SBG Project No. 3-17-SBGP-XX**

Remove the Existing Electrical Vault and Construct a New Electrical Vault; Remove the Existing PLASI Units and Install New PAPI

3. **INSTRUCTIONS TO BIDDERS.**

(a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 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 within 60 calendar days 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 Mt. Sterling Municipal Airport administration building. For engineering information, contact Kevin Lightfoot, P.E. of Hanson Professional Services, Inc. at (217) 747-9433.

6. **DISADVANTAGED BUSINESS POLICY.** The DBE goal for this contract is 1.8%.

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 November 20, 2015 and the Construction Plans dated November 20, 2015 as approved by the Department of Transportation, Division of Aeronautics.

8. 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.

9. 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 60 calendar days.

10. 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.

11. 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.

By Order of the
Illinois Department of Transportation

Randall S. Blankenhorn
Acting Secretary

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS

REQUIRED CONTRACT PROVISIONS FOR STATE FUNDED AIRPORT CONSTRUCTION PROJECTS

The following provisions are State of Illinois requirements and are in addition to the REQUIRED CONTRACT PROVISIONS FOR AIRPORT IMPROVEMENT PROGRAM AND FOR OBLIGATED SPONSORS

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.

SPECIAL PROVISION FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: January 2, 2016

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 1.8% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:
<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

BIDDING PROCEDURES. Compliance with this Special Provision is required prior to the award of the contract and the failure of the low bidder to comply will render the bid not responsive.

In order to assure the timely award of the contract, the low bidder shall submit:

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on completed Department forms SBE 2025 and 2026.
 - (1) The final Utilization Plan must be submitted within five calendar days after the date of the letting.
 - (2) To meet the five day requirement, the bidder may send the Utilization Plan electronically by scanning and sending to **DOT.DBEP@illinois.gov** or faxing to (217) 785-1524. The subject line must include the bid Item Number and the Letting date. The Utilization Plan should be sent as one .pdf file, rather than multiple files and emails for the same Item Number. It is the responsibility of the bidder to obtain confirmation of email or fax delivery.

Alternatively, the Utilization Plan may be sent by certified mail or delivery service within the five calendar day period. If a question arises concerning the mailing date of a Utilization Plan, the mailing date will be established by the U.S. Postal Service postmark on the original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the bidder to ensure the postmark or receipt date is affixed within the five days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Utilization Plan is to be submitted to:

Illinois Department of Transportation
Bureau of Small Business Enterprises
Contract Compliance Section
2300 South Dirksen Parkway, Room 319
Springfield, Illinois 62764

The Department will not accept a Utilization Plan if it does not meet the five day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Utilization Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.

- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of Utilization Plan approval or disapproval under the procedures of this Special Provision.

- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and scanned or faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
- (1) The names and addresses of DBE firms that will participate in the contract;
 - (2) A description, including pay item numbers, of the work each DBE will perform;
 - (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
 - (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
 - (5) If the bidder is a joint venture comprised of DBE companies and non-DBE companies, the Utilization Plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
 - (6) If the contract goal is not met, evidence of good faith efforts; the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.
- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
 - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
 - (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
 - (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

- b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with subsection (c)(6) of the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
 - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period in order to cure the deficiency.
 - (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217) 785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

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

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.

- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission 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 DBE regular dealer or DBE manufacturer.

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

- (a) **NO AMENDMENT.** No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.
- (b) **CHANGES TO WORK.** Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (c) **SUBCONTRACT.** The Contractor must provide DBE subcontracts to IDOT upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (d) **ALTERNATIVE WORK METHODS.** In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
 - (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
 - (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
 - (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.
- (e) **TERMINATION AND REPLACEMENT PROCEDURES.** The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special

Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;
- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.
- (6) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE 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. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department shall provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (f) **PAYMENT RECORDS.** The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

- (g) **ENFORCEMENT.** The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (h) **RECONSIDERATION.** Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

SPECIAL PROVISION FOR WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: April 2, 2015

The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

The report shall be submitted to the Resident Engineer on Division of Aeronautics Form "AER 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

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 80-01 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 ADDITIONAL STATE REQUIREMENTS FOR FEDERAL-AID CONSTRUCTION CONTRACTS

Effective: February 1, 1969

Revised: January 1, 2010

EQUAL EMPLOYMENT OPPORTUNITY

In the event of the Contractor's noncompliance with any provisions of this Equal Employment Opportunity Clause, the Illinois Fair Employment Practices Act or the Fair Employment Practices Commission's Rules and Regulations for Public Contracts, the Contractor may be declared nonresponsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be canceled or avoided 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, national origin or ancestry; 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 Commission's Rules and Regulations for Public Contracts) 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, national origin or ancestry.

(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 Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts. 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 Fair Employment Practices Commission 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 Fair Employment Practices Commission's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Commission or the contracting agency, and in all respects comply with the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts.

(6) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Illinois Fair Employment Practices Commission for purposes of investigation to ascertain compliance with the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts.

(7) That it will include verbatim or by reference the provisions of paragraphs 1 through 7 of this clause in every performance subcontract as defined in Section 2.10(b) of the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every subcontractor; and that it will also so include the provisions of paragraphs 1, 5, 6 and 7 in every supply subcontract as defined in Section 2.10(a) of the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every 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 all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Fair Employment Practices Commission in the event any subcontractor fails or refuses to comply therewith. In addition, no Contractor will utilize any subcontractor declared by the Commission to be nonresponsible and therefore ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

SPECIAL PROVISION FOR 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 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).

SPECIAL PROVISION FOR COMPLETION TIME VIA CALENDAR DAYS

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 60 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 in Section 80-09 Failure to Complete on Time of the Standard Specifications, 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.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
SECTION 80 PROSECUTION AND PROGRESS

This Special Provision amends the provisions of the Standard Specifications for Construction of Airports, adopted April 1, 2012 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

80-09 FAILURE TO COMPLETE ON TIME.

DELETE: "See contract documents for current schedule of deductions."

ADD:

Schedule of Deductions for Each Day of Overrun in Contract Time			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
\$ 0	\$ 100,000	\$ 475	\$ 675
100,000	500,000	750	1,050
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,275	1,725
3,000,000	6,000,000	1,425	2,000
6,000,000	12,000,000	2,300	3,450
12,000,000	And over	6,775	9,525

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
SECTION 90 MEASUREMENT AND PAYMENT

This Special Provision amends the provisions of the Standard Specifications for Construction of Airports, adopted April 1, 2012 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

90-07 PARTIAL PAYMENTS.

DELETE: The entire section.

ADD: Partial payments will be made to the Contractor at least once each month as the work progresses. The payments will be based upon estimates, prepared by the Resident Engineer, of the value of the work performed and materials complete and in place in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the Section 90-08 PAYMENT FOR MATERIALS ON HAND. From the amount of partial payment so determined on Federal-Aid projects, there shall be deducted an amount up to ten percent of the cost of the completed work which shall be retained until all conditions necessary for financial closeout of the project are satisfied. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1,000.00 will be approved for payment other than the final payment. A final voucher for under \$5.00 shall not be paid except through electronic funds transfer. (15 ILCS 405/9(b-1))

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Department to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in Section 90-09 ACCEPTANCE AND FINAL PAYMENT.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610) progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

In accordance with 49 USC § 47111, the Department will not make payments totaling more than 90 percent of the contract until all conditions necessary for financial closeout of the project are satisfied.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.

90-10 TRUST AGREEMENT OPTION.

DELETE: The entire section.



Required Contract Provisions for Airport Improvement Program and for Obligated Sponsors

Contents

1. REQUIRED CONTRACT PROVISIONS.	54
2. ACCESS TO RECORDS AND REPORTS. (Reference: 2 CFR § 200.326, 2 CFR § 200.333).....	56
3. AFFIRMATIVE ACTION REQUIREMENT. (Reference: 41 CFR part 60-4, Executive Order 11246).....	56
4. BREACH OF CONTRACT TERMS. (Reference 2 CFR § 200 Appendix II(A)).....	57
5. BUY AMERICAN PREFERENCE. (Reference: 49 USC § 50101).....	57
6. CIVIL RIGHTS - GENERAL. (Reference: 49 USC § 47123).....	58
7. CIVIL RIGHTS – TITLE VI ASSURANCES.	59
8. CLEAN AIR AND WATER POLLUTION CONTROL. (Reference: 49 CFR § 18.36(i)(12)).....	63
9. CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS. (Reference: 2 CFR § 200 Appendix II (E)).....	63
10. COPELAND “ANTI-KICKBACK” ACT. (Reference: 2 CFR § 200 Appendix II(D), 29 CFR parts 3 & 5).....	64
11. DAVIS-BACON REQUIREMENTS. (Reference: 2 CFR § 200 Appendix II(D))	64
12. DEBARMENT AND SUSPENSION (NON-PROCUREMENT). (Reference: 2 CFR part 180 (Subpart C), 2 CFR part 1200, DOT Order 4200.5 DOT Suspension & Debarment Procedures & Ineligibility).....	68
13. DISADVANTAGED BUSINESS ENTERPRISE. (Reference: 49 CFR part 26).....	69
14. ENERGY CONSERVATION REQUIREMENTS. (Reference 2 CFR § 200 Appendix II(H)).....	69
15. EQUAL OPPORTUNITY CLAUSE AND SPECIFICATIONS. (Reference 41 CFR § 60-1.4, Executive Order 11246).....	69
16. FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE). (Reference: 29 USC § 201, et seq.).....	73
17. LOBBYING AND INFLUENCING FEDERAL EMPLOYEES. (Reference: 49 CFR part 20, Appendix A).....	74
18. NONSEGREGATED FACILITIES REQUIREMENT. (Reference: 41 CFR § 60-1.8).....	74
19. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. (Reference 20 CFR part 1910).....	75
20. RIGHT TO INVENTIONS. (Reference 2 CFR § 200 Appendix II(F))	75
21. TERMINATION OF CONTRACT. (Reference 2 CFR § 200 Appendix II(B)).....	76
22. TRADE RESTRICTION. (Reference: 49 CFR part 30).....	76
23. TEXTING WHEN DRIVING. (References: Executive Order 13513, and DOT Order 3902.10).....	77
24. VETERAN’S PREFERENCE. (Reference: 49 USC § 47112(c)).....	78
25. APPENDICES	78

1. REQUIRED CONTRACT PROVISIONS.

Federal laws and regulations require that specific contract provisions be included in certain contracts, requests for proposals, or invitations to bid **whether or not** the contracts are federally-funded. This requirement is established within the grant assurances. Other contract provisions are required to be in federally-funded contracts, including all subcontracts. For purposes of determining requirements for contract provisions, the term **contract** includes subcontracts.

The type and magnitude of a project determines whether a provision is required. Some Federal provisions have dollar thresholds that define when they are applicable. The majority of the Federal provisions may be incorporated within the contract itself. However, certain Federal notices are required to be identified within the Notice-to-Bidders.

GENERAL REQUIREMENT FOR CONTRACTS.

In general, the sponsor must:

- 1) Physically incorporate these contract provisions (not simply by reference) in each contract funded under AIP;
- 2) Require the contractor (including all subcontractors) to insert these contract provisions in each contract and subcontract, and further require that the clauses be included in all subcontracts;
- 3) Require the contractor (or subcontractor) to incorporate applicable requirements of these contract provisions by reference for work done *whether* under any purchase orders, rental agreements and other agreements for supplies or services;
- 4) Require that the prime contractor be responsible for compliance with these contract provisions by any subcontractor, lower-tier subcontractor or service provider; and
- 5) Not modify the provisions. Minor additions covering state or sponsor requirements may be included in a separate supplemental specification, provided they do not conflict with federal laws and regulations and do not change the intent of the required contract provision.

Subject to the applicability criteria noted in the specific contract provisions, these contract provisions apply to all work performed on the contract.

GENERAL REQUIREMENT FOR REQUESTS FOR BIDS (ADVERTISEMENT) AND NOTICE TO BIDDERS

In general, the sponsor may incorporate certain provisions *by reference* in the Request for Bids (the Advertisement) rather than including the entire text of the provision in the Request or Notice. The provisions that can be incorporated by reference in the Request or Notice are:

- 1) Buy American Preference
- 2) Foreign Trade Restriction
- 3) Davis Bacon
- 4) Affirmative Action
- 5) Governmentwide Debarment and Suspension
- 6) Governmentwide Requirements for Drug-free Workplace

GENERAL REQUIREMENTS FOR ALL CONTRACTS ENTERED INTO BY OBLIGATED SPONSORS.

Where noted, the sponsor must include certain notifications in contracts or solicitations for proposals regardless of funding source.

FAILURE TO COMPLY WITH PROVISIONS.

Failure to comply with the terms of these contract provisions may be sufficient grounds to:

- 1) Withhold progress payments or final payment,
- 2) Terminate the contract,
- 3) Seek suspension/debarment, or
- 4) Any other action determined to be appropriate by the sponsor or the FAA.

REQUIRED CONTRACT PROVISIONS.

The following list summarizes the contract provisions and to what types of contracts the provisions apply:

All Contracts Regardless of Funding Source

- a. Civil Rights – General
Civil Rights – Title VI **All AIP Funded Contracts**

- a. Access to Records and Reports
- b. Affirmative Action Plan
- c. Buy American Preferences
- d. Civil Rights – General
- e. Civil Rights - Title VI
- f. Disadvantaged Business Enterprises
- g. Energy Conservation Requirements
- h. Federal Fair Labor Standards Act (Minimum Wage)
- i. Lobbying and Influencing Federal Employees
- j. Occupational Safety and Health Act
- k. Rights to Inventions
- l. Trade Restriction Clause
- m. Veteran’s Preference

Additional Provisions for AIP Funded Contracts that are \$2,000 and greater

- a. Copeland Anti-Kickback
- b. Davis Bacon Requirements

Additional Provisions for AIP Funded Contracts that are \$10,000 and greater

- a. Affirmative Action
- b. Equal Employment Opportunity
- c. Nonsegregated Facilities
- d. Termination of Contract

Additional Provisions for AIP Funded Contracts that are \$25,000 and greater

- a. Debarment and Suspension

Additional Provisions for AIP Funded Contracts that are \$100,000 and greater

- a. Breach of Contract
- b. Clean Air and Water Pollution Controls
- c. Contract Work Hours and Safety Standards

2. ACCESS TO RECORDS AND REPORTS.

(Reference: 2 CFR § 200.326, 2 CFR § 200.333)

APPLICABILITY.

Applies to all AIP-funded projects and must be included in all contracts and subcontracts.

MANDATORY CONTRACT LANGUAGE.

The mandatory language that must be used on AIP funded project contracts is as follows:

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration, the Comptroller General of the United States, and the Illinois Department of Transportation or any of their duly authorized representatives access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

3. AFFIRMATIVE ACTION REQUIREMENT.

(Reference: 41 CFR part 60-4, Executive Order 11246)

APPLICABILITY.

Incorporate in all AIP-funded construction contracts and subcontracts that exceed \$10,000. This notice must be placed within the solicitation for proposals. The goals for minority participation are dependent upon the Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA). Refer to Volume 45 of the Federal Register dated 10/3/80. Page 65984 contains a table of all EA and SMSA and their associated minority goals. Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction contractors.

MANDATORY CONTRACT LANGUAGE.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION

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:

- A. Timetables
- B. Goals for minority participation for each trade (Vol. 45 Federal Register pg. 65984 10/3/80)
- C. Goals for female participation in each trade (6.9%)

These goals are applicable to all of 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 is also subject to the goals for both federally funded and non-federally funded construction regardless of the percentage of federal participation in funding.

The contractor's compliance with the 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 specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training shall 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 contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs (OFCCP), within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer

identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is [insert description of the geographical areas where the contract is to be performed giving the state, county, and city, if any].

AFFIRMATIVE ACTION PLAN.

The Department of Labor is responsible for administering the Executive Order 11246, which contains requirements for an Affirmative Action Plan. This Plan is similar in content and requirements to the affirmative action plan required in 49 CFR Part 152 subpart e. 49 CFR Part 152 applied to grants issued under the Airport Development Aid Program, which was replaced by the Airport Improvement Program.

4. BREACH OF CONTRACT TERMS.

(Reference 2 CFR § 200 Appendix II(A))

APPLICABILITY.

This provision is required in all contracts that exceed the simplified acquisition threshold. This threshold, fixed at 41 USC 403(11), is presently set at \$100,000.

MANDATORY CONTRACT LANGUAGE.

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 2 CFR § 200 Appendix II(A). This provision requires grantees to incorporate administrative, contractual or legal remedies in instances where contractors violate or breach contract terms.

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

5. BUY AMERICAN PREFERENCE.

(Reference: 49 USC § 50101)

APPLICABILITY.

The sponsor must meet the Buy American preference requirements found in 49 USC § 50101 in all AIP-funded projects. The Buy America requirements flow down from the sponsor to first tier contractors, who are responsible for ensuring that lower tier contractors and subcontractors are in compliance. The Buy American preference also applies to professional service agreements if the agreement includes any manufactured product as a deliverable.

REQUIREMENTS.

- (a) The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program (AIP).
- (b) 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.
- (c) The successful bidder will be required to assure that only domestic steel and domestically manufactured products will be used by the Contractor, subcontractors, producers, and suppliers in the performance of this contract. The North American Free Trade Agreement (NAFTA) specifically excluded federal grant programs such as the AIP. Therefore, NAFTA does not change

the requirement to comply with the Buy American requirement in the Act. Exceptions to this are for products, other than steel, that:

- (1) the FAA has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality;
- (2) the FAA has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest;
- (3) the FAA has determined that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent; or
- (4) the FAA has determined, under the Aviation Safety and Capacity Expansion Act of 1990,
 - (i) the cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components of the facility or equipment, and
 - (ii) final assembly of the facility or equipment has occurred in the United States.

The FAA must grant waivers for any items that are included in these above exceptions. Bidders can review items already approved under the FAA nationwide approved list of "Equipment Meeting Buy American Requirements" on the FAA website, which do not require a specific FAA waiver.

All waivers are the responsibility of the Contractor, must be obtained prior to the Notice to Proceed, and must be submitted to the Division of Aeronautics for review and approval before being forwarded to the FAA. Any products used on the project that cannot meet the domestic requirement, and for which a waiver prior to the Notice to Proceed was not obtained, will be rejected for use and subject to removal and replacement with no additional compensation, and the contractor deemed non-responsive.

6. CIVIL RIGHTS - GENERAL.

(Reference: 49 USC § 47123)

APPLICABILITY.

The General Civil Rights Provisions found in 49 USC § 47123, derived from the Airport and Airway Improvement Act of 1982, Section 520, apply to all AIP-funded projects. This provision is in addition to the Civil Rights – Title VI provisions.

MANDATORY CONTRACT LANGUAGE.

The mandatory language that must be used on AIP funded project contracts is as follows:

GENERAL CIVIL RIGHTS PROVISIONS

The contractor agrees that it will comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

This provision also obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport through the Airport Improvement Program, except where Federal assistance is to provide, or is in the form of personal property; real property or interest therein; structures or improvements thereon.

In these cases the provision obligates the party or any transferee for the longer of the following periods:

- (a) the period during which the property is used by the airport sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits; or
- (b) the period during which the airport sponsor or any transferee retains ownership or possession of the property.

7. CIVIL RIGHTS – TITLE VI ASSURANCES.

Appropriate clauses from the Standard DOT Title VI Assurances must be included in all contracts and solicitations. The clauses are as follows:

- 1) Title VI Solicitation Notice
- 2) Title VI Clauses for Compliance with Nondiscrimination Requirements.
- 3) Title VI Required Clause for Land Interests Transferred from the United States
- 4) Title VI Required Clause for Real Property Acquired Or Improved by the sponsor subject to the nondiscrimination Acts and Regulations.
- 5) Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program
- 6) Title VI List Of Pertinent Nondiscrimination Statutes And Authorities

APPLICABILITY.

The sponsor must insert the **Title VI Solicitation Notice** in:

- 1) All solicitations for bids, requests for proposals work, or material subject to the nondiscrimination acts and regulations made in connection with Airport Improvement Program grants; and
- 2) All proposals for negotiated agreements regardless of funding source

The Sponsor must insert the **Title VI required contract clause** and the **Title VI list of Pertinent Nondiscrimination Statutes and Authorities** in every contract or agreement, unless the sponsor has determined and the FAA has agreed, that the contract or agreement is not subject to the nondiscrimination Acts and the Regulations.

The sponsor must insert the clauses of **Title VI Clauses for Deeds Transferring United States Property**, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.

The sponsor must include the **Title VI Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, Or Program**, the **Title VI Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program**, and the **Title VI List of Pertinent Nondiscrimination Authorities**, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the sponsor with other parties:

- 1) For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
- 2) For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

MANDATORY CONTRACT LANGUAGE.

Title VI Solicitation Notice

(Source: Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

Title VI Solicitation Notice:

The sponsor, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Title VI Clauses for Compliance with Nondiscrimination Requirements

(Source: Appendix A of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

Compliance with Nondiscrimination 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. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the **Title VI List of Pertinent Nondiscrimination Statutes and Authorities**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will 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 will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
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 will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued thereto and will 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 to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Title VI Clauses for Deeds Transferring United States Property

(Source: Appendix B of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY (As Applicable)

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of the Airport Improvement Program grant assurances.

NOW, THEREFORE, the Federal Aviation Administration as authorized by law and upon the condition that the (**Title of Sponsor**) will accept title to the lands and maintain the project constructed thereon in accordance with (**Name of Appropriate Legislative Authority**), for the (**Airport Improvement Program or other program for which land is transferred**), and the policies and procedures prescribed by the Federal Aviation Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the (**Title of Sponsor**) all the right, title and interest of the U.S. Department of Transportation/Federal Aviation Administration in and to said lands described in (**Exhibit A attached hereto or other exhibit describing the transferred property**) and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto (**Title of Sponsor**) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the (**Title of Sponsor**), its successors and assigns.

The (**Title of Sponsor**), in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the (**Title of Sponsor**) will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the Federal Aviation Administration and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

Title VI Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program

(Source: Appendix C of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM (As Applicable)

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the (**Title of Sponsor**) pursuant to the provisions of the Airport Improvement Program grant assurances.

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a Federal Aviation Administration activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Nondiscrimination Acts and Regulations listed in the Pertinent List of Nondiscrimination Authorities (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, (**Title of Sponsor**) will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*
- C. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the (**Title of Sponsor**) will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the (**Title of Sponsor**) and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

Title VI Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program

(Source: Appendix D of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM (As applicable)

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by (*Title of Sponsor*) pursuant to the provisions of the Airport Improvement Program grant assurances.

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the List of Pertinent Nondiscrimination Authorities.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above nondiscrimination covenants, (*Title of Sponsor*) will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*
- C. With respect to deeds, in the event of breach of any of the above nondiscrimination covenants, (*Title of Sponsor*) will there upon revert to and vest in and become the absolute property of (*Title of Sponsor*) and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

Title VI List of Pertinent Nondiscrimination Authorities

(Source: Appendix E of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing

entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

8. CLEAN AIR AND WATER POLLUTION CONTROL.

(Reference: 49 CFR § 18.36(i)(12)) Note, when the DOT adopts 2 CFR 200, this reference will change to 2 CFR § 200 Appendix II(G))

APPLICABILITY.

Incorporate in all professional service agreements, construction contracts and subcontracts that exceed \$100,000. (Note that the 2 CFR 200 will raise this level to \$150,000)

MANDATORY CONTRACT LANGUAGE.

CLEAN AIR AND WATER POLLUTION CONTROL

Contractors and subcontractors agree:

1. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;
2. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;
3. That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;
4. To include or cause to be included in any construction contract or subcontract which exceeds \$100,000 the aforementioned criteria and requirements.

9. CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS.

(Reference: 2 CFR § 200 Appendix II (E))

APPLICABILITY.

Incorporate in all professional service agreements, construction contracts and subcontracts that exceed \$100,000.

MANDATORY CONTRACT LANGUAGE.

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 or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) above, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 above, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 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 monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 above.

4. Subcontractors.

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 and also a clause requiring the subcontractor 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.

10. COPELAND “ANTI-KICKBACK” ACT.

(Reference: 2 CFR § 200 Appendix II(D), 29 CFR parts 3 & 5)

APPLICABILITY.

Incorporate into all construction contracts and subcontracts that exceed \$2,000 and are financed under the AIP program.

MANDATORY CONTRACT LANGUAGE.

The United States Department of Labor Wage and Hours Division oversees the Copeland “Anti-Kickback” Act requirements. All contracts and subcontracts must meet comply with the Occupational Safety and Health Act of 1970.

United States Department of Labor Wage and Hours Division can provide information regarding any specific clauses or assurances pertaining to the Copeland “Anti-Kickback” Act requirements required to be inserted in solicitations, contracts or subcontracts.

11. DAVIS-BACON REQUIREMENTS.

(Reference: 2 CFR § 200 Appendix II(D))

APPLICABILITY.

Incorporate into all construction contracts and subcontracts that exceed \$2,000 and are financed under the AIP program.

MANDATORY CONTRACT LANGUAGE.

The mandatory language is as follows:

DAVIS-BACON REQUIREMENTS

1. Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due

at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2 Withholding.

The 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 the contractor under this contract or any other Federal contract with the

same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance With Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

12. DEBARMENT AND SUSPENSION (NON-PROCUREMENT).

(Reference: 2 CFR part 180 (Subpart C), 2 CFR part 1200, DOT Order 4200.5 DOT Suspension & Debarment Procedures & Ineligibility)

APPLICABILITY.

The contract agreement that ultimately results from this solicitation is a "covered transaction" as defined by Title 2 CFR Part 180. Bidder must certify at the time they submit their proposal that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction. The bidder with the successful bid further agrees to comply with Title 2 CFR Part 1200 and Title 2 CFR Part 180, Subpart C by administering each lower tier subcontract that exceeds \$25,000 as a "covered transaction".

Incorporate in all contracts and subcontracts that exceed \$25,000.

MANDATORY CONTRACT LANGUAGE.

CERTIFICATE REGARDING DEBARMENT AND SUSPENSION (BIDDER OR OFFEROR)

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that at the time the bidder or offeror submits its proposal that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

CERTIFICATION REGARDING DEBARMENT AND SUSPENSION (SUCCESSFUL BIDDER REGARDING LOWER TIER PARTICIPANTS)

The successful bidder, by administering each lower tier subcontract that exceeds \$25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: <http://www.sam.gov>
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to tell a higher tier that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedy, including suspension and debarment.

13. DISADVANTAGED BUSINESS ENTERPRISE.

(Reference: 49 CFR part 26)

APPLICABILITY.

The Disadvantaged Business Enterprise requirements found in 49 CFR part 26, apply to all AIP-funded projects and must be included in all contracts and subcontracts. This includes both project with contract goals and project relying on race/gender neutral means.

MANDATORY CONTRACT LANGUAGE.

The mandatory language that must be used on AIP funded project contracts is as follows. Other than to insert appropriate Sponsor information into the noted spaces, the Sponsor must not modify these contract clauses:

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.

Prompt Payment (§26.29)- The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than {specify number} days from the receipt of each payment the prime contractor receives from {Name of recipient}. The prime contractor agrees further to return retainage payments to each subcontractor within {specify the same number as above} days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the {Name of Recipient}. This clause applies to both DBE and non-DBE subcontractors.

14. ENERGY CONSERVATION REQUIREMENTS.

(Reference 2 CFR § 200 Appendix II(H))

APPLICABILITY.

The Energy Conservation Requirements found in 2 CFR § 200 Appendix II(H), apply to all AIP-funded construction and equipment projects and must be included in all contracts and subcontracts.

MANDATORY CONTRACT LANGUAGE.

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 2 CFR § 200 Appendix II(H):

ENERGY CONSERVATION REQUIREMENTS

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).

15. EQUAL OPPORTUNITY CLAUSE AND SPECIFICATIONS.

(Reference 41 CFR § 60-1.4, Executive Order 11246)

APPLICABILITY.

Incorporate contract language and specifications into all construction contracts and subcontracts that exceed \$10,000 and are financed under the AIP program.

MANDATORY CONTRACT LANGUAGE.

41 CFR § 60-1.4 provides the mandatory contract language, but allows such necessary changes in language to be made to identify properly the parties and their undertakings. 41 CFR § 60-4.3 provides the mandatory specifications.

EQUAL OPPORTUNITY CLAUSE

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

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. such action shall include, but not be limited to the following: 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. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency 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 vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS

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 (OFCCP), U.S. 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:

- (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
- (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
- (3) 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
- (4) 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 shall 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 18.7a through 18.7p 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 a geographical area 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 in meeting 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 non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall 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 onsite 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 at 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 therefore along with whatever additional actions the contractor 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 female 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 agreement; 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 foremen, 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 non-segregated 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 supervisor's 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 (18.7a through 18.7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 18.7a through 18.7p 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, if the 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 specific 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 18.7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment 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 number, 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 this 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).

16. FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE).

(Reference: 29 USC § 201, et seq.)

APPLICABILITY.

The federal minimum wage provisions are contained in the Fair Labor Standards Act (FLSA) which is administered by the United States Department of Labor Wage and Hour Division. All contracts and subcontracts must meet comply with the FLSA, including the recordkeeping standards of the Act.

MANDATORY CONTRACT LANGUAGE.

All contracts and subcontracts that result from this solicitation incorporate the following provisions by reference, with the same force and effect as if given in full text. The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that pertain to a referenced requirement directly with the Federal Agency with enforcement responsibilities.

Requirement	Federal Agency with Enforcement Responsibilities
Federal Fair Labor Standards Act (29 USC 201)	U.S. Department of Labor – Wage and Hour Division

17. LOBBYING AND INFLUENCING FEDERAL EMPLOYEES.

(Reference: 49 CFR part 20, Appendix A)

APPLICABILITY.

The Lobbying and Influencing Federal Employees prohibition found in 49 CFR part 20, Appendix A, applies to all AIP-funded projects and must be included in all contracts and subcontracts.

MANDATORY CONTRACT LANGUAGE.

The mandatory language that must be used on AIP funded project contracts is as follows:

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the bidder or offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

18. NONSEGREGATED FACILITIES REQUIREMENT.

(Reference: 41 CFR § 60-1.8)

APPLICABILITY.

Incorporate in all construction contracts and subcontracts that exceed \$10,000. The notices must be placed within the solicitation for proposals. The actual certification must be incorporated in the contract agreement.

MANDATORY CONTRACT LANGUAGE AND NOTICE.

NOTICE OF NONSEGREGATED FACILITIES REQUIREMENT

Notice to Prospective Federally Assisted Construction Contractors

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a federally-assisted construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause.
2. Contractors receiving federally-assisted construction contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

3. The penalty for making false statements in offers is prescribed in 18 U.S.C. § 1001.

Notice to Prospective Subcontractors of Requirements for Certification of Non-Segregated Facilities

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a subcontract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors receiving subcontract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

3. The penalty for making false statements in offers is prescribed in 18 U.S.C. § 1001.

CERTIFICATION OF NONSEGREGATED FACILITIES

The federally-assisted construction contractor certifies that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally-assisted construction contractor 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 directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

19. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970.

(Reference 20 CFR part 1910)

APPLICABILITY.

The United States Department of Labor Occupational Safety & Health Administration (OSHA) oversees the workplace health and safety standards wage provisions from the Occupational Safety and Health Act of 1970. All contracts and subcontracts must meet comply with the Occupational Safety and Health Act of 1970.

MANDATORY CONTRACT LANGUAGE.

All contracts and subcontracts that result from this solicitation incorporate the following provisions by reference, with the same force and effect as if given in full text. The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that pertain to a referenced requirement directly with the Federal Agency with enforcement responsibilities.

Requirement	Federal Agency with Enforcement Responsibilities
Occupational Safety and Health Act of 1970 (20 CFR Part 1910)	U.S. Department of Labor – Occupational Safety and Health Administration

20. RIGHT TO INVENTIONS.

(Reference 2 CFR § 200 Appendix II(F))

APPLICABILITY.

The requirement for rights to inventions and materials found in 2 CFR § 200 Appendix II(F) applies to all AIP-funded projects and must be included in all contracts and subcontracts.

MANDATORY CONTRACT LANGUAGE.

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 2 CFR § 200 Appendix II(F).

RIGHTS TO INVENTIONS

All rights to inventions and materials generated under this contract are subject to requirements and regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed.

21. TERMINATION OF CONTRACT.

(Reference 2 CFR § 200 Appendix II(B))

APPLICABILITY.

Incorporate in all contracts and subcontracts that exceed \$10,000.

MANDATORY CONTRACT LANGUAGE.

TERMINATION OF CONTRACT

- a. 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 must 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.
- b. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price will be made, but no amount will be allowed for anticipated profit on unperformed services.
- c. 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 is liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
- d. If, after notice of termination for failure to fulfill contract obligations, it is determined that the contractor had not so failed, the termination will be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price will be made as provided in paragraph 2 of this clause.
- e. 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.

22. TRADE RESTRICTION.

(Reference: 49 CFR part 30)

APPLICABILITY.

The trade restriction clause applies to all AIP-funded projects and must be included in all contracts and subcontracts.

MANDATORY CONTRACT LANGUAGE.

The mandatory language is as follows:

TRADE RESTRICTION CLAUSE

The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);

- b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
- c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.

Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

23. TEXTING WHEN DRIVING.

(References: Executive Order 13513, and DOT Order 3902.10)

APPLICABILITY.

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

MANDATORY CONTRACT LANGUAGE.

By adopting the Applicability Language, the following contract language will meet the intent and requirement for Texting When Driving:

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

The Contractor must promote policies and initiatives for employees and other work personnel that decrease crashes by distracted drivers, including policies to ban text messaging while driving. The Contractor must include these policies in each third party subcontract involved on this project.

24. VETERAN'S PREFERENCE.

(Reference: 49 USC § 47112(c))

APPLICABILITY.

The Veteran's preference clause found in 49 USC § 47112(c) applies to all AIP-funded projects and must be included in all contracts and subcontracts that involve labor

MANDATORY CONTRACT LANGUAGE.

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 49 USC § 47112(c) is as follows:

VETERAN'S PREFERENCE

In the employment of labor (except in executive, administrative, and supervisory positions), preference must be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Title 49 United States Code, Section 47112. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

25. APPENDICES.

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	3.5

IN - Dubois, Knox, Perry, Pike, Spencer
 KY - Hancock, Hopkins, McLean, Mublenberg, Ohio, Union, Webster

081 Terre Haute, IN:	
Non-SMSA Counties -	2.5
IL - Clark, Crawford	
IN - Parke	
083 Chicago, IL:	
SMSA Counties:	19.6
1600 Chicago, IL -	
IL - Cook, DuPage, Kane, Lake, McHenry, Will	
3740 Kankakee, IL -	9.1
IL - Kankakee	
Non-SMSA Counties	18.4
IL - Bureau, DeKalb, Grundy, Iroquois, Kendall, LaSalle, Livingston, Putnam	
IN - Jasper, Laporte, Newton, Pulaski, Starke	
084 Champaign - Urbana, IL:	
SMSA Counties:	
1400 Champaign - Urbana - Rantoul, IL -	7.8
IL - Champaign	
Non-SMSA Counties -	4.8
IL - Coles, Cumberland, Douglas, Edgar, Ford, Piatt, Vermilion	
085 Springfield - Decatur, IL:	
SMSA Counties:	
2040 Decatur, IL -	7.6
IL - Macon	
7880 Springfield, IL -	4.5
IL - Mendard, Sangamon	
Non-SMSA Counties	4.0
IL - Cass, Christian, Dewitt, Logan, Morgan, Moultrie, Scott, Shelby	
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 -	2.5
IL - McLean	
6120 Peoria, IL -	4.4
IL - Peoria, Tazewell, Woodford	
Non-SMSA Counties -	3.3
IL - Fulton, Knox, McDonough, Marshall, Mason, Schuyler, Stark, Warren	
088 Rockford, IL:	
SMSA Counties:	
6880 Rockford, IL -	6.3
IL - Boone, Winnebago	
Non-SMSA Counties -	4.6
IL - Lee, Ogle, Stephenson	
098 Dubuque, IA:	
Non-SMSA Counties -	0.5

IL - JoDaviess
 IA - Atlamakee, Clayton, Delaware, Jackson, Winnesheik
 WI - Crawford, Grant, Lafayette

099 Davenport, Rock Island, Moline, IA - IL:	
SMSA Counties:	
1960 Davenport, Rock Island, Moline, IA - IL -	4.6
IL - Henry, Rock Island	
IA - Scott	
Non-SMSA Counties -	3.4
IL - Carroll, Hancock, Henderson, Mercer, Whiteside	
IA - Clinton, DesMoines, Henry, Lee, Louisa, Muscatine	
MO - Clark	
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 Contractor 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.

SECTION III

Mt. Sterling Municipal Airport
Mt. Sterling, Illinois

Remove the Existing Electrical Vault and
Construct a New Electrical Vault; Remove
The Existing PLASI Units and Install New PAPI

Illinois Project No.: I63-4325
SBG Project No.: 3-17-SBGP-XX



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November 20, 2015



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11/23/2015

COVERS CIVIL DESIGN

EXPIRES: 11/30/2017

Kevin N. Lightfoot

11/20/2015

COVERING
ELECTRICAL
DESIGN

EXPIRES: 11/30/2017

INDEX

Item No.	Description	Page No.
	Foreword	1
DIVISION I –GENERAL PROVISIONS		
70	Legal Regulations and Responsibility to the Public	2
80	Prosecution and Progress	5
DIVISION II – PAVING CONSTRUCTION DETAILS		
AR150510	Engineer's Field Office	6
AR150520	Mobilization	7
AR401910	Remove and Replace Bituminous Pavement	8
DIVISION III – FENCING (WIRE FENCES)		
162	Chain Link Fences	10
DIVISION VI – LIGHTING INSTALLATION		
108	Installation of Underground Cable for Airports	14
109	Installation of Airport Transformer Vault and Vault Equipment	23
110	Installation of Airport Underground Electrical Duct	58
115	Electrical Manholes and Junction Structures	64
AR125615	PAPI (L-880 System)	71
AR125910	Remove PLASI	80
 APPENDIX A – Constant Current Regulator and Cable Testing Forms		
 APPENDIX B – PAPI Ground Check List		
 APPENDIX C – IDOT Chain Link Fence Standard Details		

FOREWORD

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 (IDOT), Division of Aeronautics (IDA) for the following improvement project at the Mt. Sterling Municipal Airport, Mt. Sterling, Illinois including the following:

SCOPE OF WORK

This project consists of the removal of the existing electrical vault and construction of a new electrical vault, removing existing PLASI units and installing two L-880 PAPI systems on Runway 18-36, and the associated cabling, duct work, handholes, manholes, and vault work.

GOVERNING SPECIFICATIONS AND RULES AND REGULATIONS

The Standard Specifications for Construction of Airport, Illinois Department of Transportation, Division of Aeronautics, adopted April 1, 2012, shall govern the project, except as otherwise revised or noted in these Special Provisions. All references to IDOT Specifications refer to Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted January 1, 2012, as revised. In the event of inconsistencies between the Standard Specifications and the Special Provisions, the Special Provisions shall govern.

REFERENCES

The following Federal Aviation Administration Advisory Circulars are referenced on the Plans and/or Special Provision Specifications in regard to safety on airports. These Advisory Circulars are available on the FAA web site at http://www.faa.gov/regulations_policies/advisory_circulars

- A. FAA AC No. 70/7460-1K "Obstruction Marking and Lighting."
- B. FAA AC No. 150/5210-5D "Painting, Marking, and Lighting of Vehicles Used on an Airport."
- C. FAA AC No. 150/5300-13 "AIRPORT DESIGN."
- D. FAA AC No. 150/5370-2F (or most current issue) "Operational Safety on Airports During Construction."

END OF FOREWORD

DIVISION I GENERAL PROVISIONS

SECTION 70. LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

70-10 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. Add the following paragraphs to this section:

“The Mt. Sterling Municipal Airport consists of one runway; Runway 18-36.

This proposed construction will necessitate the periodic closure of Runway 18-36 throughout this project.

When a runway is closed the runway lighting system shall be shut off and the associated Nav aids for that runway shall also be shut off.

When the Contractor is working within 66 ft. of a taxiway centerline the taxiway shall be closed. No work shall occur within 66 ft. of an active taxiway centerline.

Runway 18-36 shall be closed whenever the Contractor is working within 125 ft. of the Runway 18-36 centerline. Runway 18-36 shall be reopened at the end of each construction day. All lighting circuits shall be operational on Runway 18-36 prior to the Contractor leaving at the end of the construction day. Prior to opening the Runway a Representative of the Airport, the Contractor, and the Resident Engineer/Resident Technician will inspect Runway 18-36 to be sure the pavement is clean, all holes and trenches have been backfilled, and all equipment and materials are at least 250 feet from the Runway centerline. Any deficiencies noticed will be corrected before the Contractor will be allowed to re-open the runway.

All work included in opening and closing the runways and taxiways will be considered incidental to the Project and no additional compensation will be allowed.

The Contractor will notify the **Airport Manager** seven (7) days in advance of the commencement of work, which would necessitate the closing of a runway. It will be the responsibility of the Contractor to properly mark the closed runway, and when the runway is re-opened, to remove the marking. The appropriate marking for a closed runway is a cross at both ends of the runway. The legs of the cross will be 60 ft in length and 10 ft in width. The crosses will be constructed of any suitable, locally available materials, such as fabric, plywood, or other similar material. They will be held in place in a manner locally determined to be suitable. The Contractor will be responsible for placing and removing the crosses as the runway is closed and opened. The Contractor will provide the Engineer with a proposed schedule of when and length of time for all closures. The Project Engineer must review and approve this schedule before any construction begins. The placement, maintenance and removal of the crosses will be considered as an incidental item to the contract and no additional compensation will be allowed.

When the Contractor's vehicles are on Airport property, they shall be properly marked. The markings shall consist of a 3-ft sq. flag consisting of a checkered pattern of international orange and white squares of not less than 1 ft on each side displayed in full

view above the vehicle. Contractor vehicles engaged in continuous hauling operations will not be required to display a flag.

The Contractor will be responsible for placing barricades and/or traffic cones at the locations shown on the Construction Plans, or as directed by the Airport Manager. It will be the Contractor's responsibility to furnish and maintain the barricades equipped with red flashing or red, steady-burn lights and 20-in. sq. orange flags throughout the duration of this project.

The barricades and their maintenance will be considered as an incidental item to the contract, and no additional compensation will be allowed. Any cost of labor and equipment, which is necessary to insure safety at the Airport during the duration of the project, will be considered incidental to the contract, and no additional reimbursement for these items of work will be received.

All runway closures will be coordinated with the Airport Manager. The runway will be closed in accordance with the procedures set forth on the Proposed Safety Plan. Prior to re-opening the runway the Contractor will insure the following:

1. All open holes/trenches have been backfilled.
2. All equipment has been moved to the Equipment Parking Area.
3. All trucks have their beds lowered and all cranes have their booms lowered.
4. There is no material stockpiled within the Runway Object Free Area.
5. All active pavements have been swept of foreign material.
6. All lighting circuits associated with the pavement being re-opened are active and functioning correctly.
7. Representatives of the Contractor, Airport Manager and Resident Engineer/Resident Technician shall inspect the pavement prior to re-opening. Anything noted will be corrected prior to re-opening."

Add the following:

70-27 AIRPORT SECURITY NOTES. Airport security will be maintained at all times. The Contractor will access the proposed job site through an existing gate. The Contractor will be required to close and secure this gate after he has gone through it. The gate will remain closed during the construction day unless the Contractor is in a continuous hauling operation. During periods of continuous hauling the Contractor will monitor the gate to insure no one will enter the access gate that is not authorized to be on the construction site or on the air side of the airport.

70-28 MAINTAINING OPERATION OF AIRFIELD LIGHTING AND NAVAIDS. Shut down of the lighting circuit and/or Navaids on a runway shall occur when construction activities are within the Runway Obstacle Free Zone (ROFZ) which is 125 feet of the centerline of Runway 18-36. The Contractor shall provide temporary connections and any manual operations of airfield lighting to keep them in operation over night when the respective runway is open for night time operation. The Contractor shall secure, identify, and place temporary exposed wiring in conduit, duct, or unit duct to prevent electrocution and fire ignition sources in conformance with the requirements of FAA AC 150/5370-2F "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION" or latest edition.

70-29 SITE INSPECTION. The Contractor shall be responsible for an on-site inspection prior to submitting a bid on this project. Upon receipt of a bid, it shall be assumed that the Contractor is fully familiar with the construction site.

END OF SECTION 70

SECTION 80. PROSECUTION AND PROGRESS

80-13 CONTRACTOR'S ACCESS TO AIRFIELD. Add the following to this section:

“The Contractor shall use only the designated haul route and equipment parking area as designated on the proposed Safety Plan of the Construction Plans. The Contractor's men and equipment shall not traverse outside the designated work areas to other locations on the Airport. The designated haul route will be the only vehicular access to the construction site. It will be the responsibility of the Contractor to maintain the proposed haul route and equipment parking area for the duration of the project. Upon completion of the project, the Contractor will restore the haul route and equipment parking area to their original state. This work will be considered incidental to the contract, and no Additional Compensation Will Be Allowed.

The Contractor shall access the proposed work site using an existing gate in the perimeter fence. The access gate is located across the access road between the auto parking lot and the aircraft parking apron. The Contractor will use this gate as his access. The gate shall be closed and locked at the end of each working day. The Contractor will be expected to maintain this access throughout this project. At the end of the project the Contractor will return the haul route and equipment parking area to its original condition.

The Contractor will be responsible for obtaining any permits necessary to use the State/County/Township/City roads. All work required in complying with the above requirement will be considered incidental to the contract, and no additional compensation will be allowed.

Failure to use the prescribed haul route and equipment parking area or adhere to the safety requirements will result in the suspension of work.”

Add the following:

80-14 EMPLOYEE PARKING. The Contractor's employees shall park their personal vehicles in the designated parking area shown on the safety plan. The Contractor will transport the workers from the parking area to the work area. Only Contractor vehicles will be allowed outside of the proposed equipment storage and parking areas. No employee vehicle will be allowed onto the proposed construction site.

80-15 EQUIPMENT PARKING AND MATERIAL STORAGE. The Contractor will be allowed to park equipment and store material in the proposed material storage and equipment parking area shown on the safety plan. The Contractor will maintain this area throughout the duration of the project and restore it to its' original condition upon completion of the project.

END OF SECTION 80

DIVISION II – PAVING CONSTRUCTION DETAILS

ITEM 150510 ENGINEER'S FIELD OFFICE

Item 150510 Engineer's Field Office is modified as outlined below.

CONSTRUCTION METHODS

150-2.1 Revise this section as follows:

"B. Delete this item

C. One two-drawer legal letter size filing cabinet.

G. One electric water cooler dispenser with water supply as needed, or bottled water.

H. Cellular telephone and Hi-speed broadband internet access to the field office, via either a Wi-Fi device such as a mobile hot spot, or hard wired via current technological means.

J. Delete this item.

L. One refrigerator with a minimum size of 4 cubic feet with a freezer unit."

BASIS OF PAYMENT

150-3.1 Add the following to this section:

Payment will be made under:

Item AR150510 Engineer's Field Office - per lump sum"

END OF ITEM 150510

**ITEM AR150520
MOBILIZATION**

BASIS OF PAYMENT

150-3.1 Add the following to this section:

“Payment will be made under:

Item AR150520 Mobilization - per lump sum.”

END OF ITEM 150520

**ITEM AR401910
REMOVE & REPLACE BITUMINOUS PAVEMENT**

DESCRIPTION

401910-1.1 This item shall consist of sawing, removing and replacing a full depth portion of bituminous pavement on the existing Airport Entrance Road in order to install 4-way concrete encased ducts. The pavement area to be removed and replaced shall be filled with aggregate and bituminous. The area to be replaced will be identified in the field by the Resident Engineer/Resident Technician. The existing pavement configuration consists of the following:

Bituminous Surface Course (401) – 4” depth
Crushed Aggregate Base Course (209) – 6” depth
Compacted subgrade

MATERIALS

401910-2.1 Aggregate Base Course. The proposed aggregate base course will be as specified in the Standard Specifications for Road and Bridge Construction, adopted January 1, 2012 for Coarse Aggregate (CA-7).

401910-2.2 Bituminous Surface Course. The proposed bituminous surface course shall be an approved Illinois Department of Transportation highway mix of minimum quality “D” and “N” design of 70. The mix design must have acceptance by the Division of Aeronautics, Materials Section prior to being used for this Pay Item.

CONSTRUCTION METHODS

401910-3.1 The removal area shall be sawed full depth and the material excavated to the bottom of the proposed electrical duct (as detailed on the Construction Plans). The excavated material will be removed from the airport site and disposed of at the Contractor’s expense. Once the proposed electrical duct has been installed the Contractor will backfill the open trench with CA-14 or CA-16 (compacted to the satisfaction of the Resident Engineer/Resident Technician) to the top of the subgrade and replace the pavement to the existing pavement configuration. The bituminous surface mix will be placed in two lifts (first lift – 2-1/2” and the second lift – 1-1/2”). The lifts will be compacted by conventional rollers to a minimum density of 92% and with the last lift compacted and trimmed to the existing pavement surface. Barricades and/or traffic cones shall be placed around the pavement repair area until the required bituminous has been placed.

METHOD OF MEASUREMENT

401910-4.1 The quantity of removed and replaced bituminous pavement will not be measured for payment. Removal and replacement of bituminous pavement will be considered incidental

to the respective pay item for which the duct is installed and no additional compensation will be allowed.

BASIS OF PAYMENT

401910-5.1 This item of work will not be measured for payment. Removal and replacement of bituminous pavement will be considered incidental to the respective pay item for which the duct is installed and no additional compensation will be allowed. Removal and replacement of bituminous pavement shall include all sawing, removal, disposal of waste material, furnishing and installing the CA-14/CA-16 and CA-7 backfill material, placing the bituminous; for furnishing all materials, labor, equipment, and incidentals necessary to complete this item of work.

END OF ITEM AR401910

DIVISION III – FENCING (WIRE FENCES)

ITEM 162 CHAIN-LINK FENCES (Class E)

DESCRIPTION

162-1.1 Add the following to this section:

“The proposed Class E Gates 5’ and 12’ will be 4’ in height to match up with the respective fence height. The Class E 12’ Gate shall have two 6’ wide panels/gates that meet in the middle of opening.

Add the following:

162-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering material and equipment for the following system components. Shop drawings are required for fencing and each gate. **Note shop drawings that are submitted that do not include all of the following listed requirements will be rejected and will require resubmittal. Contractor shall use the following as a check list and shall verify all information noted below is included with the respective shop drawing prior to submitting the shop drawing for review. Shop drawing shall be clear and legible. Copies that are illegible will be rejected. Separate shop drawings shall be prepared for each gate.** Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus 4 copies to be retained by the Project Engineer. Contractor may submit electronic copies of shop drawings instead of hard copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America from Domestic materials in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the Airport Improvement Program Buy American Preferences requirements.**
- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment to be used in the work. Such statements shall be furnished promptly after execution of the Contract but, in all cases, prior to delivery of such materials and equipment.
- C. Cut sheets and specifications for fencing and fencing materials.

- D. Cut sheets and specifications each gate.
- E. All steel used in the manufacturer of fencing, posts, and gate materials shall be 100% domestic steel. Contractor shall provide certification that the respective steel used in the manufacture of fencing, posts and gate materials on this project is manufactured from 100 percent domestic steel.

MATERIALS

Add the following:

"All steel used in the manufacturer of fencing and fencing materials shall be 100 percent domestic steel. Contractor shall provide certification that the respective steel used in the manufacture of fencing materials on this project is manufactured from 100 percent domestic steel.

See IDOT Standard 664001-02 "CHAIN LINK FENCE" for details on fence and gate requirements. Copy of IDOT Standard 664001-02 "CHAIN LINK FENCE" details is included in the Appendix."

CONSTRUCTION METHODS

162-3.6 ELECTRICAL GROUNDS. Add the following:

"The ground wire connections to the fencing shall be with UL listed grounding connectors of cast bronze body and bronze or stainless steel bolts, nuts, and washers. Grounding connectors shall be sized and suitable for the respective application. Connections to ground rods shall be with UL listed grounding connectors suitable for direct burial in earth or exothermic weld type connectors, Cadweld by Erico Products, Inc., Solon, Ohio, (Phone 1-800-248-9353), Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone 918-663-1440) or Ultraweld by Harger, Grayslake, Illinois (Phone 1-800-842-7437), or approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds suitable for each respective application. Ground rods shall be 5/8-in. diameter by 8 ft long (minimum), UL-listed, copper-clad. Steel used to manufacture ground rods shall be 100 percent domestic steel. Include certification that ground rods are made with 100 percent domestic steel. The ground wire used to bond the fencing to the ground rod shall be #6 AWG bare solid Copper grounding electrode conductor."

162-3.11 FENCE AND GATE REMOVAL. Add the following:

"Fence removal shall include the following:

- A. Contractor shall examine the site to determine the extent of the work.
- B. Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".

- C. The Contractor shall remove all fence, posts, concrete, fence fabric, clips, and other miscellaneous fittings associated with the fence to be removed. Shrubs, small trees, stumps, logs, etc. that are in the existing fence line shall be removed and disposed of off the airport site. The airport has right of first refusal on the fence fabric and posts. All other removed materials shall be disposed of off the Airport site by the Contractor.
- D. The Contractor will furnish earth material to fill the holes left from the fence removal. The holes will be filled and compacted to prevent future settlement. Any disturbed area of fence removal, except farming areas, will be seeded in accordance with item 901.
- E. The seeding of the disturbed areas, as described, will be considered incidental to the fence removal, and no additional compensation will be allowed.”

Add the following:

162-3.13 LOCATE EXISTING UTILITIES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor’s responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans and shall obtain from the respective utility companies detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner’s Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract. All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

METHOD OF MEASUREMENT

162-4.3 Revise this section to read as follows:

“All fencing removal and restoration associated with the installation of the gates will be considered incidental to the respective gate pay item and no additional compensation will be allowed. All fencing removal and restoration associated with the installation of the vault shelter will be considered incidental to Item AR109110 Erect Prefabricated Vault and no additional compensation will be allowed.

BASIS OF PAYMENT

162-5.1 Add the following:

“Payment will be made at the contract unit bid prices per each for gates. This price shall constitute full compensation for furnishing and installing all fencing and gate materials and for all preparation, erection, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item AR162605 Class E Gate-5’– per each

Item AR162612 Class E Gate-12’– per each”

162-5.3 Revise this section to read as follows:

“All fencing removal and restoration associated with the installation of the gates will be considered incidental to the respective gate pay item and no additional compensation will be allowed. All fencing removal and restoration associated with the installation of the vault shelter will be considered incidental to Item AR109110 Erect Prefabricated Vault and no additional compensation will be allowed.”

END OF ITEM 162

DIVISION VI – LIGHTING INSTALLATION

ITEM 108 INSTALLATION OF UNDERGROUND CABLE FOR AIRPORTS

DESCRIPTION

108-1.1. Add the following to this section:

“This Item of work shall consist of the installation (plowing, trenching, directional-boring, or installing in ducts or raceways) of cable for airfield lighting circuits and/or navaid circuits on the runways, taxiways, aprons, and the associated homeruns at the locations shown on the Plans and in accordance with these Specifications. This Item shall include cable in unit duct where noted on the Plans and specified herein.

In areas where there is a congestion of buried cable or where the proposed cable crosses an existing cable, the Contractor will be required to trench the proposed cable into place. In all other areas, the Contractor has the option to either trench or plow the proposed cable in unit duct into place.

When crossing existing circuits, the Contractor will be required to hand dig the trenches for the proposed cable.”

108-1.2 REFERENCES.

- A. ASTM Specification B3 – Standard Specification for Soft or Annealed Copper Wire.
- B. ASTM Specification B8 – Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
- C. FAA Advisory Circular 150/5340-30H DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS
- D. FAA Advisory Circular 150/5345-7E, (or latest edition) "SPECIFICATIONS FOR L-824 UNDERGROUND ELECTRICAL CABLE FOR AIRPORT LIGHTING CIRCUITS.
- E. FAA AC No. 150/5345-53 “AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM” (most current issue) and AC150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum.
- F. FAA AC No. 150/5370-2F (or most current issue) “OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION”.
- G. Federal Specification A-A-59544 Cable and Wire, Electrical (Power, Fixed Installation).
- H. NFPA 70 – National Electrical Code (most current issue in force).
- I. NFPA 70E – Standard for Electrical Safety in the Workplace.
- J. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.

- K. UL Standard 44 – Thermoset-Insulated Wires and Cables.
- L. UL Standard 83 – Thermoplastic-Insulated Wires and Cables.
- M. UL Standard 854 – Service Entrance Cables.

108-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for each wire, conductor, and/or cable type to be used on the project. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus 4 copies to be retained by the Project Engineer. Contractor may submit electronic copies of shop drawings instead of hard copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America from Domestic materials in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the Airport Improvement Program Buy American Preferences requirements. FAA approved equipment that is on the FAA Buy American Conformance List or the list of Nationwide Buy American Waivers Issued by the FAA complies with the AIP Buy American Preferences and will not require additional waiver paperwork for AIP projects. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/media/nationwideBuyAmericanWaiversIssued.pdf for a list of Nationwide Buy American Waivers Issued by the FAA.**
- B. In order to expedite the shop drawing review, inspection and/or testing of materials, the Contractor shall furnish complete statements to the Project Engineer as to the origin, composition, and manufacturer of all material to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.
- C. Indicate the pay item number for each respective cable and/or cable in unit duct.
- D. Shop drawings shall include wire/conductor/cable cut sheets with type, size, specifications, ETL (Intertek Testing Services) or UL listing, manufacturer, and catalog or part number.
- E. Shop drawings for cable in unit duct items shall include cut sheets with type, size, specifications, ETL (Intertek Testing Services) or UL listing, manufacturer, and catalog or part number for the respective unit duct.

- F. Where cable is required to have colored coded insulation, provide information on the color coding for the respective conductors.

EQUIPMENT AND MATERIALS

108-2.1 GENERAL. Add the following.

“All cable shall be FAA approved or UL-listed as suitable for installed application. Cable furnished on this project shall comply with the requirements of the Airport Improvement Program Buy American Preference Requirements. All conductors shall be copper.”

108-2.2 CABLE. Revise this section to read as follows:

L-824 Cable – L-824 cable shall be FAA L-824, Type C and shall conform to the requirements of FAA Advisory Circular 150/5345-7E, (or latest edition) "SPECIFICATIONS FOR L-824 UNDERGROUND ELECTRICAL CABLE FOR AIRPORT LIGHTING CIRCUITS". L-824 cable shall be FAA approved and listed in the current AC150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum. Circuits for use with constant current regulator outputs (runway or taxiway lighting circuits) shall use 5000-Volt rated cable. Circuits for use with low voltage applications (600 Volts or below) shall use either 5000-Volt rated cable or 600-Volt rated cable and shall have colored insulation corresponding to the respective voltage system. Cable shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Preference Requirements or be on the Federal Aviation Administration list of Nationwide Buy American Waivers.

Cable for use with airfield lighting series circuits (including runway lighting, taxiway lighting and taxi guidance signs) shall be one conductor No. 8, 5,000-Volt, FAA L-824, Type C, stranded.

Item AR108158, 1/C #8 5KV UG Cable in UD shall be one No. 8, 5,000-Volt, FAA L-824, Type C, stranded copper conductor, in unit duct (3/4-in.).

Item AR108258, 2/C #8 5KV UG Cable in UD shall be two No. 8, 5,000-Volt, FAA L-824, Type C, stranded Copper conductors, in unit duct (1-in.).

XLP-USE Wire. Cable shall comply with UL Standard 44, UL Standard 854, and Federal Specification A-A-59544. Conductor shall be concentric-strand, soft copper, conforming to ASTM B8 and Underwriters' Laboratories Standard UL44 for Rubber Insulated Wires. Insulation shall be rated for 600-Volt. Insulation shall be cross-linked polyethylene conforming to Underwriter's Laboratories Requirements for Type USE-2 insulation. Cable shall be UL-listed and marked USE-2. Cable shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Preference Requirements.

Item AR108086 1/C #6 XLP-USE shall consist of 1/C #6 AWG, XLP-USE, 600-Volt cable installed in conduit, ducts, handholes, and manholes from the Vault to the respective termination point. Conductor insulation for 120/240 VAC, single-phase, 3-wire with ground circuits shall be color-coded: Phase A – Black, Phase B – Red or black

with red tape at points of access, Neutral – White, and Ground – Green. Conductor insulation for 120 VAC, 1 phase, 2-wire with ground circuits shall be color-coded: Phase A – Black, Neutral - White, and Ground – Green. Conductor insulation for 240 VAC, 1 phase, 2-wire with ground circuits shall be color-coded: Phase A – Black, Phase B – Red or black with red tape at points of access, and Ground – Green. **Equipment ground wires used with the 120/240 VAC feeder circuits to the T-Hangar and DOT Foods hangar shall have green colored insulation.**

Item AR108082 1/C #2 XLP-USE shall consist of 1/C #2 AWG, XLP-USE, 600-Volt cable installed in conduit, ducts, handholes, and manholes from the Vault to the respective termination point. Conductor insulation for 120/240 VAC, single-phase, 3-wire with ground circuits shall be color-coded: Phase A – Black, Phase B – Red or black with red tape at points of access, Neutral – White or black with white tape at points of access, and Ground – Green.

Color-coding: Color-code phase and neutral conductor insulation for No. 6 AWG or smaller. Provide colored marking tape or colored insulation for phase and neutral conductors for No. 4 AWG and larger. **Insulated ground conductors shall have green colored insulation for all conductor sizes (AWG and/or KCMIL) to comply with NEC 250.119. Neutral conductors shall have white colored insulation for No. 6 AWG and smaller to meet the requirements of NEC 200.6.** Standard colors for power wiring and branch circuits for 120/240 VAC, 1-Phase, 3-Wire system shall be Phase A – Black, Phase B – Red, Neutral – White, and Ground – Green.”

108-2.4 CABLE CONNECTIONS. Add the following to this section:

“The Contractor will use a cable stripper/penciller whenever cable connections are made.

All breaks in the unit duct shall be sealed by shrink kits.

All below grade splices shall be installed in splice cans, handholes, or manholes. Splice cans shall be L-867, Class IA, Size B (12 in. diameter), 24 in. deep, with ½ in. thick, galvanized steel cover and stainless steel bolts. Larger size splice cans shall be provided, as applicable, for specific equipment applications or manufacturer’s recommendations, and/or where detailed on the Plans. Splice cans located in areas subject to heavy aircraft or vehicle loading shall be L-868 type. The Resident Engineer/Resident Technician shall approve all splice locations before work commences. The furnishing and installing of splice cans for new homerun cables shall be incidental to the respective cable pay item, and no additional compensation will be allowed.”

108-2.5 RESERVED. Revise 108-2.5 as follows to comply with the requirements of FAA Advisory Circular Number 150/5370-10G Standards for Specifying Construction of Airports, Item L-108 Underground Power Cable for Airports:

“108-2.5 SPLICER QUALIFICATIONS. Every airfield lighting cable splicer shall be qualified in making cable splices and terminations on cables rated at and/or above 5000 Volts AC. The Contractor shall submit to the Project Engineer proof of the qualifications of each proposed cable splicer for the cable type and voltage level to be worked on.

Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.”

108-2.12 LINE MARKING TAPE. Delete this section.

108-2.13 UNIT DUCT. Add the following:

“Standard sizes of smooth wall polyethylene duct shall conform to the dimensional requirements specified below:

Nominal Duct Size	Nominal Inside Diameter	Nominal Standard Wall	Nominal Outside Diameter*
¾”	0.910”	0.070”	1.050”
1”	1.145”	0.085”	1.315”
1-1/4”	1.440”	0.110”	1.660”
1-1/2”	1.650”	0.125”	1.900”
2”	2.065”	0.155”	2.375”
2-1/2”	2.449”	0.213”	2.875”
3”	3.048”	0.226”	3.500”
4”	4.000”	0.250”	4.500”

* Dimensions include allowance for duct eccentricity.”

CONSTRUCTION METHODS

108-3.1 GENERAL. Add the following to this section:

“The cable quantities as shown on the Construction plans are based on straight-line measurement. All other cable lengths, such as slack or waste, will not be measured for payment.

If the Contractor wishes to lay cable on a line other than that shown on the Plans, he shall obtain approval of the Project Engineer of record before doing so and coordinate with the Resident Engineer/Resident Technician. Any additional cable needed because of such change will be at the Contractor's expense.

Only cable in unit duct may be plowed or directional-bored.

The Contractor shall identify all existing underground utilities located within the area where the proposed cables are being installed, and will take all precautions to protect these utilities from damage. Care shall be taken so as not to damage any existing circuits. Any existing circuits damaged shall be immediately repaired to the satisfaction of the Engineer and/or the respective utility or owner where applicable. Any underground utility damaged will be repaired or replaced at the Contractor's own expense. Any repairs of existing cables will be considered incidental to the contract, and no additional compensation will be allowed.

Contractor shall coordinate work and any power outages with the Airport Manager or respective Airport personnel. Any shutdown of existing systems shall be scheduled with and approved by the Airport Manager prior to shutdown. Once shut down, the circuits shall

be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout).

Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".

Contractor shall comply with the applicable requirements of NFPA 70E – Standard for Electrical Safety in the Workplace.

All temporary installations shall comply with National Electrical Code Article 590 – "Temporary Installations." The Contractor shall secure, identify, and place temporary exposed wiring in conduit, duct, or unit duct to prevent electrocution and fire ignition sources in conformance with the requirements of FAA AC 150/5370-2F, Part 218, Paragraph c.

All cables installed by the Contractor shall be properly labeled and tagged at all points of access (handholes, manholes, terminal panels, control panels, and the respective wireway in the vault).

All changes to the airfield lighting system shall be documented by the Contractor and provided to the Resident Engineer/Resident Technician."

108-3.2 INSTALLATION IN DUCT OR CONDUIT. Add the following to this section:

"The unit duct will be run continuous through all ducts and conduits.

Where cable in unit duct enters a handhole with a continuous duct bank system to the termination point (such as from a handhole to the vault or between handholes) the unit duct will not be required for the respective cable."

108-3.3 TRENCHING. Add the following to this section:

"F. Cable installed in cultivated fields shall be installed a minimum of 42 in. below grade.

G. Any and all trenches will be backfilled to a smooth grade to the satisfaction of the Engineer. All trench settlement shall be corrected for a period of one year. Restoration, grading, and seeding of areas disturbed during the installation of the proposed cable will be incidental to the respective Pay Item."

108-3.5 SPLICING. Add the following:

"In-line connections for existing cables cut during construction shall be repaired with the cast splice kit. The Contractor shall have a minimum of two splice kits on the job site at all times for emergency repairs. Cast splice kits shall be specified in paragraph (a) of Item 108-2.4. **Splice cans shall be provided for existing cables cut and repaired for each splice in cables not to be abandoned. Where a splice can is not readily available at the time of the cable damage, splice markers shall be temporarily**

installed over each splice in cables not to be abandoned, then these splices shall later be replaced with new splices in an L-867 splice can.

There shall be no splices between series lighting circuit isolation transformers. In the event that a series lighting circuit cable is cut between isolation transformers, the entire length of cable between these isolation transformers shall be replaced.

The Contractor shall use a cable stripper/penciller whenever cable connections are made.

All splices and connections will be considered incidental to the respective cable.”

108-3.8 TESTING. Add the following.

- “K. Prior to beginning airfield lighting modifications and/or cable installation all existing series circuit cables shall be Megger tested and recorded at the vault. All existing series circuit cable loops shall have the resistance tested and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Copies of test results shall be provided to the Resident Engineer/Resident Technician and the respective Project Engineer.

- L. After airfield lighting modifications, additions, and/or upgrades have been completed, series circuit cables shall be Megger tested and recorded at the vault. All series circuit cable loops shall have the resistance tested and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Copies of test results shall be provided to the Resident Engineer/Resident Technician and the respective Project Engineer.”

Add the following:

108-3.12 LOCATING OF EXISTING UNDERGROUND UTILITIES AND CABLES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain, from the respective utility companies, detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract.

All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-**

0123. Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

Payment for locating and marking underground utilities and cables will not be paid for separately, but shall be considered incidental to the plowing/trenching/boring of cable and cable in unit duct.

108-3.13 SEPARATION OF HIGH-VOLTAGE AND LOW-VOLTAGE WIRING. High-voltage circuit wiring (airfield lighting 5000 Volt series circuits and/or other circuits rated above 600 Volts) and low-voltage circuit wiring (rated 600 Volts and below) shall maintain separation from each other. High-voltage wiring and low-voltage wiring shall not be installed in the same wireway, conduit, duct, raceway, handhole, or junction box. Where necessary provide split flexible duct around low voltage cables located in a handhole with high voltage cables, to isolate the cables from possible contact with each other.

108-3.14 IDENTIFICATION OF CABLES. At electrical handholes and manholes, identify and label each cable originating in the vault with respect to the system or device served. Provide identification tags rated suitable for the respective locations with permanent markings.

METHOD OF MEASUREMENT

108-4.2. Revise this section to read as follows:

“The footage of cable and/or cable in unit duct installed in duct, conduit, or raceway to be paid for shall be the number of linear feet of cable installed in duct, conduit, or raceway measured in place by direct measurement, completed, ready for operation and accepted as satisfactory with no allowance being made for overrun due to slack, turns, splices, etc. Slack cable required to perform cable splices outside of the respective splice cans, handholes, or manholes, shall be incidental to the respective cable pay item and no additional measurement for payment will be made. Coring and interface to handholes or manholes shall be incidental to the respective cable pay item and no additional measurement for payment will be made. Cable will be measured for payment from the respective termination or splice point in the field up to the vault or respective termination point.

For Item AR108082, the footage of 1/C #2 XLP-USE installed in conduit, duct, and raceway, to be paid for shall be the number of linear feet installed in conduit or duct measured between each termination or splice point. Cable will be measured for payment up to the vault. Where multiple cables are installed each one conductor cable will be measured for payment. Slack cable located at a splice can, handhole or manhole will not be measured for payment.

For Item AR108086, the footage of 1/C #6 XLP-USE installed in conduit, duct, and raceway, to be paid for shall be the number of linear feet installed in conduit or duct measured between each termination or splice point. Cable will be measured for payment up to the vault. Where multiple cables are installed each one conductor cable

will be measured for payment. Slack cable located at a splice can, handhole or manhole will not be measured for payment.

Cable or cable in unit duct installed inside or below the vault shall be incidental to Item AR109200, and no additional measurement for payment will be made.”

BASIS OF PAYMENT

108-5.1. Add the following:

“Payment will be made at the contract unit price per lin. ft of cable completed and accepted by the Engineer. This price shall be full compensation for furnishing all materials, and for all preparation, assembly, and installation of these materials; for all splices and connections; for all plowing, trenching, directional-boring, coring of manholes or handholes, installation in ducts, raceways, conduits, splice cans, handholes, or manholes, and for all excavation and backfilling; for all site restoration (topsoiling, grading, seeding, mulching) and pavement restoration; and for all labor, equipment, tools, and incidentals necessary to complete this Item.

Payment will be made under:

Item AR108082, 1/C #2 XLP-USE - per linear foot
Item AR108086, 1/C #6 XLP-USE - per linear foot
Item AR108158, 1/C #8 5KV UG Cable in UD - per linear foot
Item AR108258, 2/C #8 5KV UG Cable in UD - per linear foot”

END OF ITEM 108

ITEM 109
INSTALLATION OF AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT

DESCRIPTION

109-1.1. Revise this section to read as follows:

“Item AR109110 “Erect Prefabricated Vault” shall consist of furnishing and installing a pre-fabricated equipment shelter, its concrete piers or concrete slab, the concrete pad under and around the shelter, and concrete step/pad/sidewalk at entry, as applicable in accordance with this Specification at the location, design, and dimensions shown on the Construction Plans. This item shall include the sidewalk from the parking lot to the vault. This item shall include all fencing removal and restoration associated with the installation of the vault shelter. This item shall include all labor, equipment, materials, coordination, installation, testing, and the furnishing and installation of all incidentals necessary to produce a completed vault building and place it in operating condition.”

Add the following:

109-1.2. Item AR109200 “Install Electrical Equipment” shall consist of furnishing and installing electrical equipment inside the new vault as detailed on the Plans and specified herein. This item shall also include furnishing and installing electric unit heaters, exhaust/ventilation fans, louvers, dampers, and associated controls for the mechanical system. This item shall include all labor, materials, transportation, equipment, wiring, raceways, grounding, warranties, tools, utility coordination, relocations, operational instructions, labeling, testing, and all incidentals required to place the vault and associated equipment into proper working order as a completed unit to the satisfaction of the Owner and Engineer.

Included under this item shall be the following:

- A. Field verification of existing site conditions to determine complexity of the proposed work.
- B. Coordinating all work with the Airport Manager, the designated Airport Maintenance Staff, and the Resident Engineer/Resident Technician.
- C. Furnishing and installing all associated electrical equipment, support hardware, raceways, conduits, cable, wiring, grounding, and accessories as detailed on the Plans and specified herein.
- D. Furnishing and installing the heating and ventilation system and associated controls in the new vault.
- E. Furnishing and installing all pull boxes, junction boxes, wireways, raceways, conduits, conduit fittings, and ducts in, beneath, and adjacent to the vault.
- F. Furnishing and installing all necessary cable and wiring within or at the vault, as detailed on the Plans and specified herein.
- G. Furnishing and installing new electric service for vault. This work shall include service conductors and conduit from the respective electric utility transformer to the service and

distribution panelboard, and providing a grounding system as detailed on the Plans and specified herein. This item shall include all labor, equipment, wiring, raceways, grounding, materials, tools, utility coordination, labeling, testing and all incidentals required to remove and replace the respective electric service installation to the satisfaction of the serving electric utility, Owner and Engineer. Included under with this work shall be the following:

- a. Coordinating all work with the Airport Manager, the Airport maintenance staff, and the Resident Engineer/Resident Technician.
 - b. Coordinating with the serving electric utility the installation of new electric service.
 - c. Furnishing and installing a new grounding electrode system as detailed on the Plans and Specified herein.
 - d. Furnishing and installing primary duct as detailed on the Plans and specified herein.
 - e. Furnishing and installing new electric service to the vault, as detailed on the Plans and specified herein.
- H. Relocating existing constant current regulators located in the existing vault or in storage to the new vault.
- I. Relocating existing fuel system equipment and panels from the existing vault to the new vault along with associated conduit, junction boxes and wiring. Personnel designated to relocate the respective fuel system equipment panels shall be qualified and familiar with the respective fuel facility system equipment. **Contractor may employ the services of the fuel system service representative; Illinois Oil Marketing Equipment, Inc., 850 Brenkman Drive, Pekin, IL 61554, Office Phone: (309) 347-1819, or 1-800-447-2611, attn. Mr. Pete Bradshaw, to assist in the relocation of the fuel system equipment.**
- J. Furnishing and installing a new safety switch for the airport rotating beacon with associated conduit, wiring, and grounding. The conduit from the low voltage handhole near the beacon tower to the new safety switch at the airport rotating beacon tower shall be included with Item AR109200.
- K. Furnishing and installing the L-854 radio antenna on the beacon tower with the associated antenna cable and conduit from the vault to the tower.
- L. Furnishing and installing all grounding and surge protection, as detailed on the Plans and specified herein.
- M. Grounding for the beacon tower guy wires shall be included with item AR109200.
- N. Locating, identifying, relocating, and/or replacing all existing airfield lighting cables and existing airfield equipment cables, as necessary to disconnect these respective cables from the existing vault and reconnect, replace and/or interface these respective cables to the new vault as applicable. This shall include all splices, cable, interfacing work to handholes (including rerouting cables, duct entrances, sleeves, patching, etc.), splice cans, identification, and labeling cables at each respective handhole and at the respective vault, maintaining separation of low-voltage cables from high-voltage cables, any temporary

connections to maintain operation of the respective airfield systems, and any other work required to restore proper operation of the existing airfield systems when reconnected to the new vault. All work shall be coordinated with the Airport Manager and shall be coordinated to minimize down time to the respective airfield systems.

- O. Furnishing shop drawings for new equipment.
- P. Identifying and labeling all control wiring associated with the control circuit upgrades.
- Q. Testing, adjusting, and retesting (where applicable) all new equipment and modifications to existing systems for proper operation.
- R. Labeling all mechanical and electrical equipment and incidentals necessary to place all of the equipment in operation as a complete unit acceptable to the Owner and Engineer.
- S. Furnishing operation, maintenance, and installation manuals for all new equipment.

109-1.3. Item AR109901 "Remove Electrical Vault" shall consist of removal of existing vault shelter, foundation, and all equipment and associated wire and raceway located in the existing vault as detailed on the Plans and specified herein. The vault shelter shall be removed and turned over to the Airport. The Airport will provide a trailer, and the Contractor will load the shelter on to the trailer, or shall relocate the trailer to a designated storage area on the Airport property. The existing constant current regulators shall be relocated to the new vault (as detailed on the Plans). The existing fuel system equipment and panels shall be relocated to the new vault. All other equipment to be removed shall be turned over to the Owner. The Airport shall retain salvage rights to the vault and equipment. In the event that the Owner does not want the respective equipment, the Contractor shall dispose of that respective equipment in a legal manner off of the airport property. Removal of vault equipment shall include the removal of the existing electric equipment, conductors and conduit, service and feeder conductors to the existing vault, and the associated coordination. Removal of vault equipment shall include the removal of the existing conductors and conduits associated with the vault, including disconnecting the respective service to the vault and the associated utility coordination. This item shall include all labor, equipment, tools, excavating, disposal, utility coordination, and incidentals required to complete this item of work. Removal of vault equipment shall also include backfill, furnishing earth material, seeding, mulching and grading to restore the respective areas affected by the removal work.

109-1.4 REFERENCES

- A. ANSI C80.1 – Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.4 – Fittings Rigid Metal Conduit and EMT.
- C. ANSI Z535.4-2002 - American National Standard for Product Safety Signs and Labels.
- D. ASTM Specification B3 – Standard Specification for Soft or Annealed Copper Wire.
- E. ASTM Specification B8 – Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.

- F. Federal Specification A-A-59544 Cable and Wire, Electrical (Power, Fixed Installation).
- G. FAA AC No. 150/5340-26C "MAINTENANCE OF AIRPORT VISUAL AID FACILITIES".
- H. FAA AC No. 150/5340-30H "DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS".
- I. FAA AC No. 150/5345-7E, (or latest edition) "SPECIFICATIONS FOR L-824 UNDERGROUND ELECTRICAL CABLE FOR AIRPORT LIGHTING CIRCUITS.
- J. FAA AC No. 150/5345-10G (or most current issue in effect) "SPECIFICATION FOR CONSTANT CURRENT REGULATORS AND REGULATOR MONITORS".
- K. FAA AC No. 150/5345-49C "SPECIFICATION L-854 RADIO CONTROL EQUIPMENT".
- L. FAA AC No. 150/5345-53 "AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM" (most current issue) and AC150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum.
- M. FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
- N. FAA-STD-019d dated August 9, 2002, Department of Transportation, Federal Aviation Administration Standard, LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING, AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT.
- O. FAA-STD-019e, December 22, 2005, Department of Transportation, Federal Aviation Administration Standard, LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT.
- P. NFPA 70 – National Electrical Code (most current issue in force).
- Q. NFPA 70E – Standard for Electrical Safety in the Workplace.
- R. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.
- S. UL Standard 6 – Rigid Metal Conduit.
- T. UL Standard 44 – Thermoset-Insulated Wires and Cables.
- U. UL Standard 83 – Thermoplastic-Insulated Wires and Cables.
- V. UL Standard 467 – Grounding and Bonding Equipment.
- W. UL Standard 486A-486B Wire Connectors.
- X. UL Standard 514B – Conduit, Tubing and Cable Fittings.

109-1.5 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for vault equipment and materials to be used on the project. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus 4 copies to be retained by the Project Engineer. Contractor may submit electronic copies of shop drawings instead of hard copies. Shop Drawings shall clearly indicate proposed items, capacities, characteristics, and details in conformance with the Plans and Specifications. The respective manufacturer shall certify capacities, dimensions, special features, etc. When a submittal is marked "Revise and Resubmit", "Rejected", and/or "Not Approved", do not proceed with that part of the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations, resubmit, and repeat if necessary to obtain a different action mark such as "No Exceptions Taken" or "Furnish as Corrected". Contractor is responsible for compliance with the specified characteristics. Contractor's responsibility for error and omissions in submittals is not relieved by the Engineer's review of submittals. Accompany each submittal with a transmittal letter that includes the date, project title and number, Contractor's name and address, the number of Shop Drawings, product data and/or samples submitted, notification of any deviations from the Contract, and any other pertinent information. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the AIP Buy American Preferences requirements. FAA approved equipment that is on the FAA Buy American Conformance List or the list of Nationwide Buy American Waivers Issued by the FAA complies with the AIP Buy American Preferences and will not require additional waiver paperwork for AIP projects. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/media/nationwideBuyAmericanWaiversIssued.pdf for a list of Nationwide Buy American Waivers Issued by the FAA.**
- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials and equipment.
- C. Provide shop drawings for the pre-fabricated vault.
- D. Concrete mix design.
- E. Provide shop drawings for the exhaust fan, intake louver, unit heaters, and light fixtures.

- F. Submittals for panelboards shall include manufacturer, catalog numbers, panel schedule, voltage and amperage ratings, bus material, integrated short circuit ampere rating, circuit breaker arrangement and sizes and respective enclosure.
- G. Cut sheets with part number and specifications for the transient voltage surge suppressor.
- H. Cut sheets with part number and specifications for the constant current regulator. Include list of spare parts.
- I. Cut sheets with part number and specifications for the S-1 cutouts and enclosure.
- J. Furnish shop drawings for the L-854 radio receiver.
- K. Furnish shop drawings for the radio control interface/relay control interface panel at the Vault. Shop drawings shall include panel layout, terminal block arrangement, and wiring diagram for the panel.
- L. Furnish shop drawings for the lighting contactor control panel for the Airport Nav aids and Vault Exhaust Fan. Shop drawings shall include panel layout, terminal block arrangement, and wiring diagram for the panel.
- M. Furnish shop drawings for the double throw safety switches to be used with the Runway constant current regulators and other safety switches as detailed on the Plans.
- N. Provide cut sheets for all types of conduit used in the vault (for example galvanized rigid steel conduit and UL listed liquid tight flexible metal conduit). Include certification that steel conduits are made with 100 percent domestic steel.
- O. Provide cut sheets for 6-inch by 6-inch wireway to be used in the vault.
- P. Provide cut sheets for the power and control circuit conductors.
- Q. Provide cut sheets with manufacturer's name, catalog number, dimensions, material and UL listing for each type and size ground rod. Include certification of 100% domestic steel for ground rods. Include cut sheets for exothermic weld connections, ground lugs, and ground wire.
- R. Provide shop drawings for the ground bus bars. Include manufacturer, dimensions, part numbers, and information on standoffs, insulators, splices, bonding jumpers, and mounting hardware.
- S. Cut sheets with part number and specifications for each fire extinguisher.

EQUIPMENT AND MATERIALS

109-2.1 GENERAL. Add the following to this section:

- "C. FAA approval of airport lighting equipment and subsequent inclusion in Advisory Circular 150/5345-1 "Approved Airport Equipment", and/or Advisory Circular 150/5345-53 "Airport Lighting Equipment Certification Program" only means that

the test data satisfied the applicable Specification requirements. This does not insure that the approved equipment will satisfactorily operate when connected power-wise and/or control-wise to other approved airport lighting equipment or "off the shelf" equipment not requiring FAA approval.

- D. The Contractor shall ascertain that all lighting system components furnished by him (including FAA-approved equipment) are compatible in all respects with each other and the remainder of the new system. Any non-compatible components furnished by the Contractor shall be replaced by him, at no additional cost to the Airport Sponsor, with a similar unit approved by the Engineer (different model or different manufacturer) that is compatible with the remainder of the airport lighting system.
- E. Except as specified otherwise, all new equipment shall be provided by the Contractor and shall be tested for Specification conformance as part of the Aviation Lighting Equipment Certification Program. Certification of conformance, as tested by the respective testing laboratory, shall be provided by the manufacturer for all items submitted for approval."

109-2.4 BRICK. Delete this section.

109-2.5 RIGID STEEL CONDUIT. Add the following:

"GRSC shall be heavy wall, hot-dipped, galvanized steel pipe bearing the UL label and conforming to UL-6 and ANSI Specification C80.1. Couplings, connectors, and fittings for rigid steel conduit shall be threaded, galvanized steel, or galvanized malleable iron specifically designed and manufactured for the purpose. Fittings shall conform to ANSI C80.4 and UL-514B. Set screw type fittings are not acceptable. Steel used to manufacture conduits shall be 100 percent domestic steel. Contractor shall provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.

Where noted on the Plans Polyvinylchloride (PVC) coated, galvanized rigid steel conduit shall be furnished and installed for additional corrosion protection. PVC coated, galvanized rigid steel conduit and fittings shall be as manufactured by Robroy Industries, Inc., Conduit Division, 1100 US Highway 271 South, Gilmer, Texas 75644, Phone 903-843-5591, Sales Department Fax: 903-843-2516, or approved equivalent. The conduit and fittings, prior to coating, shall be new, unused material, and shall conform to UL 6, Standard for Safety for Rigid Metal Conduit and UL 514B Standard for Safety, Fittings for Conduit and Outlet Boxes. An exterior PVC coating of a nominal 40 mils (.040 in.) shall be applied to the conduit and conduit couplings. The PVC coating shall conform to all applicable requirements of NEMA RN-1, Standard for PVC Coated Conduit. A red urethane coating of 2 mils (.002 in.) shall be uniformly and consistently applied to the interior of conduit and conduit couplings. Conduit or fittings having areas of thin or no interior coating shall be unacceptable. The PVC exterior and urethane interior coatings applied to conduit shall have sufficient flexibility to permit field bending without cracking or flaking at temperatures above 30°F, (-1°C). All male threads on conduit, elbows, and nipples, and all female threads on conduit couplings and fitting shall be protected by application of urethane coating. "

109-2.6 LIGHTING. Add the following:

“Lighting Fixtures and lamps shall be as designated in "Lighting Fixture Schedule" on the Plans. Provide fixtures complete with all required accessories. Provide conduit and wiring as detailed on the Plans. Fixture wiring shall comply with fixture manufacturer's recommendations and the NEC requirements. Mounting Hardware: Provide mounting hardware to supplement building structure for support of fixtures. Supports shall be capable of supporting 300 percent fixture and lamp weight. Emergency lighting system consists of selected fixtures as indicated on Plans. Emergency lighting fluorescent fixtures shall be self-contained, modular, battery-inverter unit factory-mounted within fixture body. Comply with UL 924, and include the following features:

- A. Test Switch and Light-Emitting Diode Indicator Light: Visible and accessible without opening fixture or entering ceiling space.
- B. Battery: Sealed, maintenance-free, nickel-cadmium type with minimum 10-year nominal life.
- C. Charger: Fully automatic, solid-state, constant-current type.
- D. Operation: Relay automatically energizes lamp from unit when normal supply circuit voltage drops to 80 percent of nominal voltage or below. When normal voltage is restored, relay disconnects lamp, and battery is automatically recharged and floated on charger.”

109-2.7 OUTLETS. Add the following:

- “A. General Purpose Receptacles. General purpose receptacles for all wall-type convenience outlets in non-hazardous areas shall be of the 20-Amp, 125-volt, 3-wire grounding type, NEMA 5-20R, heavy-duty specification-grade **ivory** in color, Arrow Hart Part Number 5362, Bryant Part Number 5362, Hubbell Part Number 5362, Pass & Seymour Part Number 5362, or approved equal. Cover plates for flush-mounted, general purpose receptacles shall be of the stainless steel type as manufactured by Arrow Hart, Bryant, Hubbell, Pass & Seymour, or approved equal.
- B. GFCI Receptacles. Receptacles with ground-fault circuit interrupters shall be provided and installed where noted on the Plans. Ground-fault circuit interrupter receptacles shall be rated 120 VAC, 60 HZ, 20 Amps, specification-grade with NEMA 5-20R receptacle configuration and a trip threshold of 5 ± 1 milliamps. Ground fault circuit interrupter receptacles shall be UL Class “A” ground-fault interrupter receptacle units complying with and tested in accordance with UL Standard No. 943. Ground fault circuit interrupter receptacles shall be Arrow Hart Part Number GF5342, Bryant Part Number GFR53FT, Hubbell Part Number GF5362, Pass & Seymour Part Number 2091-S, or approved equal.
- C. Device Boxes. Device boxes for flush-mounted, non-hazardous receptacles and switches shall be sheet steel construction. Cover plates shall be stainless steel, as manufactured by Arrow Hart, Bryant, Hubbell, Pass & Seymour, or approved equal. Surface-mount device boxes shall be of cast aluminum or malleable iron FS design with cover plates of surface-mount FS design, as manufactured by Appleton, Crouse Hinds, or equal. Weatherproof covers shall be industrial grade, rain-tight NEMA 3R (while outlet is in use, as well as when not in use), UL-listed, FS box-mountable, weatherproof covers, TayMac Corporation Catalog No. 20550, or approved equal.”

109-2.8 SWITCHES. Revise to read as follows:

- A. Toggle Switches. Single-pole toggle switches shall be 20-Amp, 120/277-volt, specification-grade, as manufactured by Arrow Hart, Bryant, Hubbell, Pass & Seymour, or approved equal. Single-pole, 20-Amp, 120/277-Volt toggle switches shall be Arrow Hart Part Number 1991, Bryant Part Number 4901, Hubbell Part Number 1220, Pass & Seymour Part Number 20AC1, or approved equal.
- B. Device Boxes. Device boxes for flush-mounted, non-hazardous receptacles and switches shall be sheet steel construction. Surface mount device boxes for receptacles and toggle switches shall be die cast construction weatherproof boxes as manufactured by Appleton, Crouse Hinds, Hubbell/RACO/Bell or approved equal. Cover plates shall be stainless steel as manufactured by Arrow Hart, Bryant, Hubbell, Pass & Seymour, or approved equal.”

109-2.13 GROUND BUS. Revise to read as follows:

“Ground bus for the vault interior shall be 1/4 in. thick by 2 in. wide Copper bus bar, as manufactured by Harger Lightning Protection Inc., Gus Berthold Electric Company, or approved equivalent. Length shall be as detailed on the Plans. Ground bus shall include standoffs, insulators, splices, bonding jumpers, mounting hardware, etc., as required for the respective application. Splices for 1/4 in. thick by 2 in. wide bus bar shall be with manufacturers splice plates and stainless steel nuts, bolts, and washers. Exothermic weld connections are also acceptable splices for the ground bus. Splice plates shall be bolt through type Copper with minimum dimensions 1/4 in. thick by 2 in. wide by 6 in. length with 4 bolts. Include an engraved phenolic or plastic legend plate 1/2-in. high white letters on a green background labeled “VAULT GROUND BUS”. All cable connections to the ground bus shall be with two-hole tongue, long barrel compression lugs bolted to the bus bar, as detailed on the Plans.”

109-2.14 SQUARE DUCT. Revise the last sentence to read:

“Square duct shall be sized, as detailed on the Plans.”

Add the following:

“Wireway shall be installed, as indicated on the Plans, including, but not limited to, straight lengths, elbows, tees, offsets, panel adaptors, closing plates, wire retainers, and supports, as required for a complete installation. Wireways shall be constructed of 16-gauge steel before finishes are applied. All straight lengths of wireway shall have hinged or bolt-on covers. Lengths shall be provided with cover latches, a minimum of every 3 ft, which shall hold the cover securely in-place when closed. Sealing ears shall be provided on both the wireway lengths and connector covers so that the entire run can be sealed.

Wireways shall be 6 in. by 6 in., as detailed on the Plans. Wireways shall be furnished without knockouts. Connectors shall be slip-in type with self-retained mounting screws. They shall also have the feature to allow “lay-in” of all conductors. Wireways shall be provided with a gray epoxy-painted finish applied over a corrosion-resistant phosphate primer. All wireway lengths and accessories shall be Underwriter’s Laboratories listed

and labeled in conformance with UL 870 Standards for Wireways, Auxiliary Gutters, and Associated Fittings and conform to NEMA 1 enclosure rating.

Wireways shall be constructed of Domestic steel. Contractor shall provide certification that the respective wireways used on this project are manufactured from 100 percent domestic steel.”

109-2.15 GROUND RODS. Revise to read as follows:

“Ground rods for the vault ground ring shall be 3/4-in. diameter, **10 ft long**, UL-listed, Copper-clad. Ground rods shall have 10 mils minimum Copper coating. Ground rods shall be manufactured in the United States of America. Steel used to manufacture ground rods shall be 100 percent domestic steel.”

109-2.16 POTHEADS. Delete this section.

109-2.17 PRE-FABRICATED METAL HOUSING. Delete this section. Replace with the following:

109-2.17 PRE-FABRICATED EQUIPMENT SHELTER. This item shall consist of a pre-fabricated, pre-engineered equipment enclosure building with concrete floor, steel skid structure, and foundation piers. This item shall include all labor, equipment, materials, coordination, installation, testing, and the furnishing and installation of all incidentals necessary to accomplish the Scope of Work stated herein and required to produce a completed building and place it in operating condition. Pre-fabricated equipment shelter shall be as described below or an approved equal. The pre-engineered equipment enclosure shall be a light-weight metal or fiberglass building with concrete floor and steel skid structure, nominal 12 ft wide exterior (Note: interior width shall not be less than 11 ft, adjust exterior width, as applicable) by nominal 28 ft long exterior (Note: interior length shall not be less than 27 ft., adjust exterior length, as applicable) by nominal 9 ft-0 in. high interior (floor to ceiling), as manufactured by VFP, Inc, 176 East Park Drive, Roanoke, Virginia 24019, Phone 1-540-977-0500, Fax: 540-977-5555, or approved equal, with the following features:

- A. Double-door assembly, with two 36 in. wide x 84 in. high doors. Doors with frame shall be UL rated 1.5 hour fire rated. Doors shall be furnished with:
 - (2) Stainless steel door strap hinges (per door).
 - Stainless steel classroom-style, key-locked, lever handle.
 - Stainless steel door stop chain (per door).
 - Door sweep with heavy-duty vinyl threshold (per door).

- B. Structural loads as follows:
 - 200 lbs. per sq. ft distributed floor loading.
 - 90 lbs. per sq. ft distributed roof load.
 - 120 mph wind load.
 - Seismic zone 4.

- C. Interior walls and ceiling shall be sheathed with 1/2-in. thick minimum white nupoly board with blocking/studs provided in the walls behind the paneling for secure mounting of equipment, suitable for mounting the respective electrical and mechanical equipment, as specified herein and as detailed on the Plans. Insulation value shall not be less than R-11. Where applicable for support of panelboards, control panels, mechanical equipment, etc. provide additional 4 ft by 8 ft, 3/4-in. thick equipment-mounting boards.
- D. Exterior support hardware for exterior-mounted electrical and/or mechanical equipment, as specified herein and detailed on the Plans.
- E. Floor shall be constructed of 3 in. of concrete, reinforced by the steel foundation skid. The floor shall be finished with 1/8-in. thick, 12 in. by 12 in., light colored, industrial-grade vinyl tile floor covering. Floor shall include a waterproof seal. The floor structure shall be capable of supporting uniform loads of 200 lbs. per sq. ft.
- F. For a lightweight metal building, the exterior walls of the shelter shall be constructed of painted galvaneal steel panels. The exterior roof of the shelter shall be constructed of sealed galvaneal steel panels, with an additional standing seam-painted galvaneal cap. For a fiberglass building, provide granacrylic exterior finish over a seamless fiberglass coating, 1/8-in. thick exterior fiberglass on walls, and 1/4-in. thick on roof.
- G. Building shall rest on an integral steel skid structure designed to support the building during transportation, lifting, and final placement on site. The skid shall incorporate integral lifting points to allow the building to be placed by a crane or other suitable means.
- H. The pre-engineered equipment enclosure shall be delivered to the site and installed onto cast-in-place concrete piers sized and constructed per the respective building manufacturer's recommendations and not less than 5 ft deep by 30 in. diameter. Concrete shall conform to Item 610 Structural Portland Cement Concrete of the Standard Specifications for Construction of Airports. Piers shall extend a minimum of 2 in. above finished grade. Adjust pier elevations as necessary to provide level mounting of the vault building. Provide a minimum of 4 in. of aggregate bedding at the base of each foundation pier. Concrete piers shall include four #5 vertical rebar with #3 lateral ties at 12 in. on center maximum spacing. The building shall be anchored to the piers, in accordance with the building manufacturer's instructions, using anchor bolts sized per the respective building manufacturer's recommendations and/or requirements. Following initial installation, the building shall be adjusted, as required, and cleaned in accordance with the manufacturer's instructions.
- I. The pre-engineered equipment enclosure shall be manufactured and installed to accommodate mechanical and electrical systems, equipment, and fixtures specified in other Specification sections.
- J. Building color(s) will be selected by the Owner from the full range of manufacturer's standard colors.

- K. Required submittals shall include: Product data; Shop Drawings showing dimensions, building layout, building construction, connections, materials, structural components, etc.; structural design calculations sealed by a Licensed Structural Engineer or Licensed Professional Engineer (as applicable); details on the doors, louvers, fan and any other equipment furnished with the building, floor loading, roof loading, wind loads, and seismic information, and manufacturer's installation instructions.
- L. The pre-engineered equipment enclosure shall be warranted by the manufacturer to be free of defects in workmanship and materials for a period of **five years** from shipment.
- M. The pre-engineered equipment enclosure shall comply with all applicable codes, ordinances, and other legal requirements of all federal, state and municipal agencies, and authorities having jurisdiction over this project."

109-2.18 FAA-APPROVED EQUIPMENT. Add the following:

"FAA approved equipment shall also comply with the requirements of the Airport Improvement Program Buy American Preference Requirements. FAA approved equipment shall include the following:

- A. Constant Current Regulator for Runway 18-36. Constant Current Regulator (CCR) for Runway 18-36 shall be a Type L-828 constant current regulator, Class 1 - 6.6 Amps output current, Style 1 - three brightness steps (4.8, 5.5, and 6.6-Amps), 7.5 KW (minimum), 240 VAC, single-phase, 60 Hertz input. Constant current regulator shall comply with FAA AC 150/5345-10G for Type L-828 regulator and shall be FAA Approved. Constant current regulator shall properly operate the respective airfield lighting system it is powering. Constant current regulator shall be capable of properly operating two sets (two pairs) of Type L-849I(L) REILS with the runway lighting system. **The steady burning light load for the runway lighting system has been calculated to be approximately 6500 Watts.** Constant current regulator must cause the minimum possible radiated or conducted electromagnetic interference (EMI) to airport and FAA Equipment (example; computers, radars, instrument landing systems, radio receivers, VHF Omni-directional Range, etc.) that may be located on or near an airport. Constant current regulator shall include open circuit protection, over current protection, output current ammeter, output voltmeter, and arresters of the proper rating to protect the CCR from lightning induced voltage and current surges installed at both the input and output terminals of the CCR. Constant current regulators shall also include a remote/local control feature with selections for "Remote, Off, 10% Brightness, 30% Brightness, and 100% Brightness". Control voltage shall be 120 VAC (internal/external). Constant current regulators shall be ADB Airfield Solution dry-type ferro-resonant regulator, Manairco, Inc. dry-type ferromagnetic reactor regulator, or approved equal. Include the following spare components:
 - 1. One spare control circuit board for each type in the constant current regulator
 - 2. Primary switch contactor
 - 3. Lightning arresters (input and two output)
 - 4. Control circuit fuses or breaker

Note the requirement for the constant current regulator to be capable of properly operating two sets (two pairs) of Type L-849I(L) REILS with the runway lighting system, is based on a future application shown on the Airport Layout Plans. FAA AC 150/5340-30H, Chapter 7 ECONOMY APPROACH AIDS, Part 7.5 DESIGN, b. REIL, Paragraph (1)(b) notes "If using a CCR (constant current regulator) for REIL primary power, ensure that the regulator will accommodate a pulsing load that may have reactive components. Consult the manufacturers of both the CCR and REIL before making a final decision."

- B. Constant Current Regulator for Runway 18-36 PAPI systems. Constant Current Regulator (CCR) for Runway 18-36 PAPI systems shall be a Type L-828 constant current regulator, Class 1 - 6.6 Amps output current, Style 2 – five (5) brightness steps (2.8, 3.4, 4.1, 5.2, and 6.6-Amps), 5 KW (minimum), 240 VAC, single-phase, 60 Hertz input. Constant current regulator shall comply with FAA AC 150/5345-10G for Type L-828 regulator and shall be FAA Approved. Constant current regulator shall properly operate the respective airfield lighting system it is powering. **The steady burning light load for the proposed PAPI systems on Runway 18-36 has been calculated to be approximately 4500 Watts. In the event that the respective PAPI circuit loads exceed 4500 Watts a larger constant current regulator properly sized for the respective loads will be required.** Constant current regulator must cause the minimum possible radiated or conducted electromagnetic interference (EMI) to airport and FAA Equipment (example; computers, radars, instrument landing systems, radio receivers, VHF Omni-directional Range, etc.) that may be located on or near an airport. Constant current regulator shall include open circuit protection, over current protection, output current ammeter, output voltmeter, and arresters of the proper rating to protect the CCR from lightning induced voltage and current surges installed at both the input and output terminals of the CCR. Constant current regulators shall also include a remote/local control feature with selections for "Remote, Off, 10 percent Brightness, 30 percent Brightness, and 100 percent Brightness". Control voltage shall be 120 VAC (internal/external). Constant current regulators shall be ADB Airfield Solution dry-type ferro-resonant regulator, Manairco, Inc. dry-type ferromagnetic reactor regulator, or approved equal. Include the following spare components:
1. One (1) spare control circuit board for each type in the constant current regulator.
 2. Primary switch contactor.
 3. Lightning arresters (input and two (2) output).
 4. Control circuit fuses or breaker.
- C. L-854 Radio Controller. L-854 radio controller shall be FAA-approved and comply with FAA AC 150/5345-49 (latest issue), and FCC Rules and Regulations: Part 15. The radio controller shall be a Type I classification (air-to-ground) unit consisting of an AM receiver and Type A decoder mounted in a metal weatherproof enclosure, painted international orange per FAA Standard 595A. Input voltage shall be 120 VAC, 60 Hz. Frequency range shall be 118 to 136 MHz. Unit shall have solid-state circuitry other than the relays. Include a remote antenna with sufficient length of coaxial cable to mount above the vault building roof for proper operation. Frequency shall be 122.8 MHz. Confirm frequency with the Airport Manager, prior to ordering."

109-2.19 OTHER ELECTRICAL EQUIPMENT. Add the following:

“Switches, cutouts, relays, lighting contactors, terminal blocks, circuit breakers, and all other regularly used commercial items of electrical equipment not covered by FAA equipment specifications shall conform to the applicable rulings and standards of the institute of Electrical and Electronic Engineers or the National Electrical Manufacturer’s Association. When specified, test reports from a testing laboratory indicating that the equipment meets the specifications shall be supplied. In all cases, equipment shall be new and a first-grade product. This equipment shall be supplied in the quantities required for the specific project and shall incorporate the electrical and mechanical characteristics specified in the Plans or in the proposal. Contractor shall confirm quantity for all electrical equipment with the Plans. Equipment and Materials shall be manufactured in the United States to comply with the Airport Improvement Program Buy American Preference Requirements. Proposed electrical equipment for the vault shall be as follows:

- A. Radio Control Relay Interface Panel. Relay interface panels shall be provided for the constant current regulators to interface the L-854 radio controller to each respective constant current regulator and each respective navaid lighting contactor. Relay interface panels shall be as detailed on the Plans. Relay interface panels shall be manufactured by an FAA approved L-821 control panel manufacturer or a UL 508 industrial control panel builder and shall be manufactured in the United States to comply with the Airport Improvement Program Buy American Preference Requirements.
- B. Lighting Contactor Panel for Airport NAVAIDS. The lighting contactor panel for use with the airfield Nav aids and lighting (including the Airport Rotating Beacon, Wind Cone, and apron lighting) and shall be as detailed on the Plans. The lighting contactor panel shall be manufactured by an FAA approved L-821 control panel manufacturer or a UL 508 industrial control panel builder and shall be manufactured in the United States to comply with the Airport Improvement Program Buy American Preference Requirements.
- C. Type S-1 Series Plug Cutouts. Provide series plug cutouts for each constant current regulator as detailed on the Plans. Series plug cutouts shall be Type S-1, rated 5KV, 20-Amp, and shall comply with FAA AC 150/5340-4C. Cutouts shall be certified in writing by the manufacturer as suitable for the respective application. Cutouts shall disconnect the input from the output, short the input terminals, and short the output terminals when the handle/plug is removed. Series plug cutouts shall be Crouse-Hinds, Type S-1, Model 2, Catalog Number 30775, or an approved equal. Series cutouts where the manufacturer has noted their cutouts are not recommended to operate with the handle pulled/removed are not acceptable. Other cutouts, that do not function as detailed on the Plans or that are not suitable for the respective application, are not acceptable. Install the series plug cutouts in a NEMA 1 or NEMA 12 painted steel enclosure adequately sized to house the cutout(s), with a hinged cover and back panel to mount the cutouts. All enclosures shall be pad lockable.
- D. Main Service and Distribution Panelboard “A”. Main distribution panel shall be 400 Amp, 240/120 VAC, 3-phase, 4-wire with solid neutral with a 400 Amp, 3-pole back fed main breaker, copper bus braced for 25,000 Amperes symmetrical (minimum) at 240 VAC, 27 inches minimum of breaker mounting space, suitable

for 400 Amp frame branch breakers, in a NEMA 3R and 12 enclosure UL-listed suitable for service entrance, Square D, I-line, Type HCP Series, or approved equal. All bussing shall be copper. Neutral bus shall be copper. Include separate copper equipment ground bars adequately sized for all ground wires and grounding electrode conductors to and from the panel. Main breaker and all branch and feeder breakers shall have an interrupting rating of 25,000 Amps minimum at 240 VAC and shall be constructed in accordance with NEMA AB1 and UL 489. Circuit breakers shall be equipped with individually insulated braced and protected connectors. The front faces of all circuit breakers shall be flush with each other. Large, permanent, individual circuit numbers shall be affixed to each breaker in a uniform position (or equip each breaker with a circuit card holder and neatly printed card identifying the circuit). Tripped indication shall be clearly shown by the breaker handle taking a position between ON and OFF. Provisions for additional breakers shall be such that no additional connectors will be required to add breakers. See Plans for details on size and quantity of branch and feeder breakers. Panel shall be UL-listed and bear the UL label. Provide legend plates as detailed on the Plans. Coordinate selection of two pole breakers with the manufacturer to confirm proper bus connections.

- E. Vault Distribution Panelboard B. Circuit breaker panelboard shall be rated 120/240 VAC, 1 phase, 3-wire and shall have Copper bus structure braced for 10,000 RMS Amperes fault current minimum at 120/240 VAC. All Copper parts shall be plated to prevent corrosion. Panelboards shall bear the UL label. Panelboards for service entrance applications shall be UL-listed suitable for service entrance. All panelboards shall be dead-front safety-type, equipped with thermal magnetic-molded case breakers and solid neutral bus. Bus bar connections to the branch circuit breakers shall be the "Distributed Phase" or "Phase Sequence" type. Bussing shall be such that adjacent single-pole breakers will be on different phases or polarities, and that two pole breakers can be installed at any location. Panelboard numbering shall be such that starting at the top, odd numbers shall be used in sequence down the left hand side, and even numbers shall be used in sequence down the right hand side. Cabinets shall be fabricated of code-gauge, galvanized steel with gutters per the NEC. Fronts shall have doors with matching one-piece trim, be code-gauge, and be finished with rust-inhibiting primer and baked enamel. Fronts shall have adjustable indicating trim clamps completely concealed when door is closed. Provide a circuit directory frame and card with a clear plastic covering on the inside of the doors. Fronts shall have flush locks, and be furnished with two keys per lock. Provide circuit breakers, quick-make, quick-break, thermal-magnetic, trip indicating, and common trip on all multi-pole breakers. Handles shall have "ON", "OFF" and "TRIPPED" positions. Circuit breakers shall be UL-listed in accordance with UL Standard 489. Breakers shall have bolt-on connections to the bus. Amperage trip ratings, voltage ratings, interrupting current ratings, and number of poles shall be as shown on the panelboard schedules. Contractor shall confirm and adjust circuit breaker sizes, as required for the respective equipment or device being fed, in accordance with the respective equipment manufacturer's recommendation and the NEC. Panelboards shall be furnished with Copper-ground bus and separate insulated neutral bus.
- F. Fuel System Panelboard C. Circuit breaker panelboard shall be rated 120/240 VAC, 1 phase, 3-wire and shall have Copper bus structure braced for 10,000

RMS Amperes fault current minimum at 120/240 VAC. All Copper parts shall be plated to prevent corrosion. Panelboards shall bear the UL label. Panelboards for service entrance applications shall be UL-listed suitable for service entrance. All panelboards shall be dead-front safety-type, equipped with thermal magnetic-molded case breakers and solid neutral bus. Bus bar connections to the branch circuit breakers shall be the "Distributed Phase" or "Phase Sequence" type. Bussing shall be such that adjacent single-pole breakers will be on different phases or polarities, and that two pole breakers can be installed at any location. Panelboard numbering shall be such that starting at the top, odd numbers shall be used in sequence down the left hand side, and even numbers shall be used in sequence down the right hand side. Cabinets shall be fabricated of code-gauge, galvanized steel with gutters per the NEC. Fronts shall have doors with matching one-piece trim, be code-gauge, and be finished with rust-inhibiting primer and baked enamel. Fronts shall have adjustable indicating trim clamps completely concealed when door is closed. Provide a circuit directory frame and card with a clear plastic covering on the inside of the doors. Fronts shall have flush locks, and be furnished with two keys per lock. Provide circuit breakers, quick-make, quick-break, thermal-magnetic, trip indicating, and common trip on all multi-pole breakers. Handles shall have "ON", "OFF" and "TRIPPED" positions. Circuit breakers shall be UL-listed in accordance with UL Standard 489. Breakers shall have bolt-on connections to the bus. Amperage trip ratings, voltage ratings, interrupting current ratings, and number of poles shall be as shown on the panelboard schedules. Contractor shall confirm and adjust circuit breaker sizes, as required for the respective equipment or device being fed, in accordance with the respective equipment manufacturer's recommendation and the NEC. Panelboards shall be furnished with Copper-ground bus and separate insulated neutral bus.

- G. Surge Protective Device for Vault Panelboard. AC power surge protective device shall be UL-listed per UL 1449, Third Edition, and shall conform to the applicable requirements of FAA-STD-019d dated August 9, 2002, "LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING, AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT". AC power surge protective device for the main distribution panel shall be suitable for a 120/240 VAC, 1-phase, 3-wire, plus ground system with a surge current rating of 240,000-Amps, 8 x 20 microsecond wave per mode (L-L, L-N, L-G, N-G), and status indication lights in a NEMA 12-rated enclosure, Lightning Protection Corporation Model LPC 2020-8U-G, or approved equal. Include six spare indicator lamps with each AC power surge protective device.
- H. Fractional Horsepower Manual Motor Starters. Fractional horsepower manual motor starters shall be toggle-operated type with thermal overload protection in each phase conductor sized for the respective motor. Fractional horsepower manual motor starters shall be installed in NEMA 1 surface enclosures where located indoors in a dry, non-corrosive, non-hazardous location. Fractional horsepower manual motor starters shall be installed in NEMA 4/4X enclosures where located outdoors or in wet locations. Starters shall include handle guard/lock off feature to permit pad locking the device in the off position. Acceptable Fractional horsepower manual motor starter products are General Electric - CR101, Square D - Class 2510, Cutler-Hammer – MS, or approved equal.

- I. Photocells. Photocells for use with the airfield lighting controls shall be rated 2000-Watts at 120 VAC, with off delay, -40°C to 60°C operating temperature range, Tork Model No. 2101, or approved equal. Contractor shall confirm the selected photocell is suitable for the respective application.
- J. Double Throw Fusible Safety Switch. Double throw fusible safety switches for use as a manual transfer switch shall be UL listed, heavy duty, 240 VAC, 2-pole with Amperage ratings as detailed on the Plans and equipment ground kit in a NEMA 1 enclosure, as manufactured by Cutler-Hammer or approved equal. Switch must be suitable to connect a single power source to either of two different loads. The switch will be used to connect power to either of two different constant current regulators. Switches that are not rated for this application or that void the UL listing for this application are not acceptable. Safety switches shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Preference Requirements. Include Class RK5 fuses sized as detailed on the Plans as manufactured by Bussmann, Littlefuse, or approved equal. Include 2 spare fuses of each size and type for each switch.
- K. Junction and Pull Boxes. Junction and pull boxes shall be sized, as required for conductors and splices and per 2014 NEC Article 314. Boxes shall be UL-listed. Special boxes made to suit conditions shall be used to accommodate the respective application, or where required by the NEC, even though they might not be indicated on the Drawings. Surface-mounted exterior junction and pull boxes located in non-hazardous, non-classified areas shall be NEMA 4X stainless steel or aluminum, Crouse-Hinds, Killark, Hoffman, Hennessy, or equal. All junction and pull boxes installed in classified hazardous areas (Class 1, Division 1 or 2, Group D) shall be NEMA 7 and NEMA 4 and shall comply with applicable provisions of the NEC, including, but not limited to, Articles 500 and 501.
- L. Schedule 40 PVC and Schedule 80 PVC Conduit. Schedule 40 PVC and Schedule 80 PVC conduit shall comply with Item 110 and the following: Conduit shall be Schedule 40 PVC or Schedule 80 PVC (as detailed on the Plans), UL-listed, rated for 90°C cable-conforming to NEMA Standard TC-2 and UL 651. Fittings shall conform to NEMA Standard TC-3 and UL 514B. Conduits shall be suitable for underground applications encased in concrete or direct burial, and suitable for exposed applications aboveground.
- M. Liquid-Tight Flexible Metal Conduit. Liquid-tight, flexible metal conduit shall consist of polyvinyl jacket over flexible hot dip galvanized steel tubing. The flexible conduit shall be completely sealed from liquids, dust, dirt, and fumes and be resistant to oil, gasoline, grease, and abrasion. Jacket shall also be sunlight-resistant. Liquid-tight flexible metal conduit shall be UL-listed, suitable for use as a grounding conductor, and comply with Article 350 of the NEC. **Liquid-tight flexible metal conduit and associated fittings shall be UL-listed to meet the requirements of NEC 350.6.** Liquid-tight flexible metal conduit shall be Anaconda Sealtite Type UA as manufactured by Anamet Electrical Inc., 1000 Broadway Avenue East, Mattoon, Illinois 61938-0039, (Phone: 217-234-8844), Liguatite Type LA as manufactured by Electri-Flex Company, 222 W. Central Ave., Roselle,

Illinois 60172, (Phone: 630-529-2920 or 1-800-323-6174), or approved equal. Do not install liquid-tight, flexible metal conduit that is not UL listed. Confirm liquid-tight, flexible metal conduit bears the UL label prior to installation.”

109-2.20 WIRE. Add the following to Section A. Control Circuits:

“THWN Wire. Cable shall comply with Underwriters’ Laboratories Standard UL-83 and Federal Specification A-A-59544. Conductor shall be soft-annealed, uncoated Copper and shall comply with ASTM B3 and B8. Insulation shall be rated for 600-Volt. Insulation shall be polyvinyl-chloride conforming to Underwriters’ Laboratories requirements for Type THW. The outer covering shall be nylon-conforming to Underwriters’ Laboratories for type THHN or THWN. Cable shall be UL-listed and marked THWN.”

Delete paragraphs 1, 2, and 3 under Section B. Power Circuits.

Add the following:

“Power Cable (600-Volt and Below). All power wiring, 600-Volt and below, shall be the type, size, and number of conductors as noted on the Plans. Cable shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Preference Requirements.

THWN Wire. Cable shall comply with Underwriters’ Laboratories Standard UL-83 and Federal Specification A-A-59544. Conductor shall be soft-annealed, uncoated Copper and shall comply with ASTM B3 and B8. Insulation shall be rated for 600-Volt. Insulation shall be polyvinyl-chloride conforming to Underwriters’ Laboratories requirements for Type THW. The outer covering shall be nylon-conforming to Underwriters’ Laboratories for type THHN or THWN. Cable shall be UL-listed and marked THWN-2. Power and control wiring shall be Type THWN-2, or approved equal.
Note where THWN wiring is referenced on the Plans, it shall be THWN-2.

XHHW Wire. Cable shall be UL-listed as Type XHHW-2 per UL Standard 44. Cable shall also conform to ICEA S-95-658/NEMA WC70 and Federal Specification A-A-59544. Conductors shall be Class B stranded, annealed, uncoated Copper per UL Standard 44. Insulation shall be rated for 600-Volt. Insulation shall be cross-linked polyethylene complying with the physical and electrical requirements of UL Standard 44 for Type XHHW-2. XHHW wire may be used in place of THWN wire for all applications.

XLP-USE Wire. Cable shall comply with UL Standard 44, UL Standard 854, and Federal Specification A-A-59544. Conductor shall be concentric-strand, soft Copper, conforming to ASTM B8 and Underwriters’ Laboratories Standard UL44 for Rubber-Insulated Wires. Insulation shall be rated for 600-Volts. Insulation shall be cross-linked polyethylene conforming to Underwriter’s Laboratories Requirements for Type USE-2 insulation. Cable shall be UL-listed and marked USE-2.

Series Circuit 5000-Volt Cable. Cable for use with series circuit airfield lighting shall be FAA-L-824, Type C cable complying with Item 108. L-824 cable shall be FAA approved and listed in the current AC150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum. Cable furnished on this project shall be manufactured in the United States of America to comply with the Airport

Improvement Program Buy American Preference Requirements or be on the Federal Aviation Administration list of Nationwide Buy American Waivers. Circuits for use with constant current regulator outputs (runway lighting, taxiway lighting, and Style B PAPI circuits) shall use 5000-Volt rated cable.

Grounding electrode conductors and/or bonding jumpers shall be the size and type, as detailed on the Plans. Ground wire for bonding constant current regulator housings, cutout enclosures, and other vault equipment frames to the vault ground bus shall be #6 AWG stranded Copper.”

109-2.21 FLOOR DRAINS. Delete this section.

Add the following:

109-2.22 FIRE EXTINGUISHERS. Furnish and install a UL rated, 10 pound Carbon Dioxide fire extinguisher suitable for use on Class C Fires and a 10 pound Class 4A:80B:C dry chemical ABC fire extinguisher suitable for use on Class A,B,C Fires, in the vault. Per NFPA 10 “Portable Fire Extinguishers” Class C are for fires that involve energized electrical equipment. Fire extinguishers shall be made in the United States of America to comply with the Buy American Preference Requirements. Fire extinguisher type CO2 shall be Amerex Model 330, Kidde Model PRO10CDM or approved equal. Fire extinguisher dry chemical type ABC shall be Amerex Model B456, or approved equal. Provide wall mounting bracket for each fire extinguisher. Confirm model numbers with the respective fire extinguisher manufacturer.

109-2.23 MECHANICAL EQUIPMENT.

- A. Ventilation System. Ventilation system shall be as detailed on the Plans. Input power for fan and damper motors shall be 120 VAC.
- B. Electric Wall Heaters. Provide fan forced electric wall heaters in the capacity required for maintaining space temperature at 72°F in the winter. Each wall heater shall include the following features: Heating element shall be of the non-glowing design consisting of a special resistance wire enclosed in a steel sheath to which plate fins are Copper brazed. Heater shall include a 5-year warranty. Heating capacity shall be as shown on the Plans. The fan shall be 5-bladed aluminum. The fan motor shall be totally enclosed. Fan delay switch shall be bi-metallic, snap action-type. Fan shall be activated after heating element reaches operating temperature. Integral thermostat shall be bi-metallic, snap action-type with enclosed contacts. Thermal cutout shall be built in the system to automatically shut off the heat in the event of overheating and reactivate the heater when temperature returns to normal. Provide white louvered steel front cover. Provide surface-mounting box for surface installation, painted to match front cover. All sheet metal parts shall be phosphatized, and final finished in baked enamel paint. Input voltage shall be 240 VAC, 1 phase, 60 Hz. Heaters shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Preference Requirements.

CONSTRUCTION METHODS

CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

109-3.1 GENERAL. Add the following:

“The Contractor shall coordinate the installation of mechanical and electrical equipment with the building manufacturer and the foundation and floor. Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) “OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION”.

109-3.2 FOUNDATION AND WALLS. Revise this section as follows:

“Foundations shall be constructed as specified in 109-2.17 PRE-FABRICATED EQUIPMENT SHELTER.”

109-3.3 ROOF. Delete this Section.

109-3.4 FLOOR. Revise this section as follows:

“The building floor shall be constructed as specified in 109-2.17 PRE-FABRICATED EQUIPMENT SHELTER.”

109-3.5 FLOOR DRAIN. Delete this section.

109-3.7 DOORS. Add the following:

“Doors with frame shall be UL rated 1.5 hour fire rated. Doors shall be as specified in 109-2.17 PRE-FABRICATED EQUIPMENT SHELTER.”

109-3.8 PAINTING. Delete this section.

109-3.9 LIGHTS AND SWITCHES. Add the following:

“Furnish and install receptacles, toggle switches, and control stations, as detailed on the Plans. Receptacles, toggle switches, and control stations shall be located at 4 ft–0 in. above finished floor elevation or finished grade at all structures. Adjust locations and/or mounting heights, where necessary, to avoid interferences. All receptacles shall be grounded with an equipment ground wire connected to the grounding terminal or screw on the receptacle. All toggle switches shall be grounded with an equipment ground wire connected to the grounding terminal or screw on the switch. Test all GFCI receptacles and receptacles protected by GFCI’s for proper operation. Verify all receptacles and switches are wired for the correct voltage.”

INSTALLATION OF EQUIPMENT IN VAULT OR PREFABRICATED METAL HOUSING

109-3.10 GENERAL. Add the following to this section:

“The Contractor shall furnish and install all materials necessary for complete and operational installation of the vault equipment, as specified herein and as shown on the Plans. The complete installation and wiring shall be done in a neat, workmanlike manner. All electrical work shall comply with the requirements of the NFPA 70 – National Electrical Code (NEC) most current issue in force, and all other applicable local codes, laws, ordinances, and requirements in force. Electrical equipment shall be installed in conformance with the respective manufacturer’s directions and recommendations for the respective application. Any installations which void the UL listing, Intertek Testing Service verification/ETL listing (or other third party listing), and/or the manufacturer’s warranty of a device will not be permitted.

- A. Contractor shall keep a copy of the latest NEC in force on site at all times during construction for use as a reference.
- B. Contractor shall keep a copy of the Plans, Special Provision Specifications including any addenda, and copies of any change orders on site at all times during construction.
- C. Contractor shall coordinate work and any power outages with the Airport Manager and the Resident Engineer/Resident Technician. Any shutdown of existing systems shall be scheduled with and approved by the Airport Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures including, but not limited to, 29 CFR section 1910.147 The Control of Hazardous Energy (lockout/tagout).
- D. Contractor shall comply with the applicable requirements of NFPA 70E – Standard for Electrical Safety in the Workplace.
- E. All electrical equipment installed by the Contractor shall be properly labeled, and all cables must be tagged.
- F. All power and control cables shall be installed in conduit, wireways, pull boxes, junction boxes, or raceways. No exposed power or control wiring will be permitted.
- G. All changes to the airfield lighting system control wiring will be documented by the Contractor and provided to the Resident Engineer/Resident Technician.
- H. Locate Existing Underground Utilities and Cables. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor’s responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain, from the respective utility companies, detailed

information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract. All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

- I. Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- J. Secure, identify, and place any temporary exposed wiring in conduit to prevent electrocution and fire ignition sources."

109-3.11 POWER SUPPLY EQUIPMENT. Add the following to this section:

"Electric Service Entrance for Vault. Contractor shall furnish and install electric service entrance for the Vault, as detailed on the Plans and specified herein. As part of the service entrance work, the Contractor shall coordinate with the serving utility; **Adams Electric Cooperative, 700 East Wood Street, P. O. box 247, Camp Point, Illinois 62320, Phone: (217) 593-7701,** the installation of a 120/240 VAC, 1-phase, 3-wire service sufficient to handle a 400-Amp service for the new airport vault and associated equipment. **The respective Airport Authority/IDOT Division of Aeronautics shall pay for all associated electric utility company charges required to provide electric service to the new airport vault. The Contractor is not responsible for electric utility company charges associated with the proposed electric service to the new vault.** The Contractor shall coordinate the new electric service with the serving electric utility company and the Airport Manager. The service entrance shall include, but not be limited to, all service entrance equipment, labor, and materials, as detailed on the Plans and specified herein, in order to provide a complete and operational electrical system.

- A. Electric Utility Company: Major work items to be performed by the serving electric utility company will be as follows:
 1. The furnishing of power for a 120/240 VAC, 1-phase, 3-wire secondary service sufficient to handle the loads for a 400-Amp service.
 2. Furnishing and installing service conductors from the utility transformer to the meter base.
 3. Furnishing and installing the meter.
 4. Making final connections to the utility transformer.
 5. The serving electric utility company will retain the right to review and approve Drawings prior to installation.

- B. Contractor: Major work items to be performed by the Contractor shall be as follows: all work, labor, equipment, and materials shall be as detailed on the Plans specified herein and per the serving electric utility's requirements, where applicable.
1. Furnishing and installing service entrance equipment, meter base, and support hardware as detailed on the Plans.
 2. Furnishing and installing service entrance conduit from the electric utility transformer to the service disconnect.
 3. Furnishing and installing service entrance cables from the meter base to the service disconnect.
 4. Furnishing and installing ground conductors, ground rods, and grounding electrode conductor conduit.
 5. Coordinating work with the Airport Manager.
 6. Coordinating work and verifying all requirements with serving electric utility.
 7. Additional work as required by the serving electric utility and as required to provide a complete and operational electric service entrance system.

Constant Current Regulators. Install constant current regulators in conformance with the manufacturer's recommendations, as detailed on the Plans and as specified herein. Maintain working clearances in front of constant current regulators per the requirements of NEC 110.26 and 110.34. Maintain clearance around constant current regulators for air flow and cooling per the respective manufacturer's recommendations. Confirm circuit breaker sizes for constant current regulators are sized in conformance with the respective manufacturer's recommendations and/or requirements and NEC. Where necessary to accommodate the respective constant current regulator input amperage requirements, circuit breakers, conductors, and conduits shall be adjusted (increased in size) to meet the manufacturer's recommendations and/or requirements and the NEC. Conduit connections to constant current regulators shall be with UL-listed, liquid-tight, flexible metal conduit. Include an external bonding jumper or internal equipment ground wire with each piece of liquid-tight, flexible metal conduit that is connected to a constant current regulator to comply with NEC 350.60. High-voltage wiring shall enter each respective regulator at the high-voltage/series circuit output section of the regulator. 240 VAC input power wiring shall enter each respective regulator at the low-voltage/input power section of the regulator. Furnish and install control wiring, as detailed on the Plans. Control wiring shall enter each respective regulator at the control section of the regulator. Bond each constant current regulator enclosure frame, to the vault ground bus with a #6 AWG (minimum), bare-stranded, Copper-bonding jumper."

109-3.12 SWITCHGEAR AND PANELS. Add the following to this section:

- A. Installation of Control Panels. Install control panels, as detailed on the Plans and in conformance with the respective panel manufacturer's requirements and/or recommendations.
- B. Installation of S-1-Type Cutouts. Install plug cutouts in conformance with the manufacturer's recommendations, as detailed on the Plans and as specified herein. Provide NEMA 1 or NEMA 12 painted steel enclosures adequately sized for the cutouts and cables with hinged cover and back panel to mount the plug cutouts.

- C. Installation of Panelboards. Panelboards shall be thoroughly inspected for physical damage, proper alignment, anchorage, and grounding. The exterior finish shall be inspected for blemishes, nicks, and bare spots and touched up, as required, using matching touch-up paint. Inspections shall be made for proper installation and tightness of connections for circuit breakers. Install panelboards, as shown on the Plans and in accordance with NEMA PB1.1. Maximum distance from floor to highest breaker shall not exceed 6 ft-6 in. Install panelboards plumb. Install circuit breakers in panelboards in conformance with the respective manufacturer's directions. Connect only one wire/cable to each breaker terminal. Provide filler plates for unused spaces in panelboards. Provide typed circuit directory for each branch circuit panelboard to identify the respective device fed by each circuit breaker. Revise directory to reflect circuiting changes, as required. Provide legend plates for all panelboards to identify the panelboard designation, the power source, and the voltage system. Legend plates shall be weatherproof and abrasion-resistant, phenolic material. Lettering shall be black on white background. Panelboards shall be thoroughly tested after installation and connection to respective loads.
- D. Surge Arrester Installation. Install Surge Protector Devices (SPD)/TVSS devices in conformance with of FAA-STD-019d, dated August 9, 2002, "LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT" and the respective manufacturer's directions and recommendations. Contractor shall confirm all connections to the surge arrester (phases, neutral, and ground) are completed and secure. Connection leads to the surge arrester shall be sized per the respective manufacturer's recommendation and as detailed herein, and shall be maintained as short as possible, maximum 2 ft in length, and laced together for mutual coupling. The conduit or conduit nipple connecting the SPD/TVSS device enclosure to the panel enclosure shall be sealed with duct seal or other nonflammable medium to prevent soot from entering the enclosure in the event of a SPD/TVSS device failure.
- E. Installation of Safety Switches. Safety switches shall be provided with appropriate mounting hardware and strut support. Strut support shall be hot-dipped, galvanized steel strut support, Unistrut P-1000 HG, or approved equal. Provide zinc rich paint applied to field cuts of strut support to minimize the potential for corrosion per the respective strut support manufacturer's recommendation. All hardware shall be corrosion-resistant. Mount safety switches securely in accordance with the manufacturer's recommendations/instructions and as required for the respective application. Inspect all safety switches for proper operation, tight and secure connections, and correctness. All safety switch enclosures shall be bonded to ground with a ground lug or bar and ground wire. Field cut holes in safety switch enclosures to accommodate conduit entrances. Where safety switch enclosures are provided with concentric knockouts, and the respective conduit does not use the largest knockout, install a grounding bushing with ground wire connections between the bushing and the ground bus. Where safety switches enclosures are used for service entrance applications provide a grounding bushing with ground wire connections between the bushing and the ground bus at each metal conduit entry. Do not use safety switch enclosures for a splice box or for a pull box. Do not route control wires or other circuit wiring through a safety switch enclosure. Where splices are required or other control circuit wires are installed in the respective conduit to a safety switch, provide a separate junction box to accommodate the splices and/or

other circuit conductors. Provide weatherproof, abrasion-resistant, engraved legend plates for each safety switch noting the device served, the power source, and the voltage system.”

109-3.13 DUCT AND CONDUIT. Add the following to this section:

- “A. Conduit shall be installed in accordance with the following:
1. All service, feeder, branch circuit, and control circuit conduits associated with the vault shall be galvanized rigid steel conduit as detailed on the Plans.
 2. Schedule 40 PVC conduits shall be used for individual grounding electrode conductors and/or bonding jumpers.
 3. Liquid-tight, flexible metal conduit shall be used as specified herein.
- B. Conduit Runs:
1. All conduits shall be sized, as indicated on the Drawings, or if conduit sizes not shown shall be in accordance with the NEC. All conduit systems shall be mechanically and electrically continuous from source of current to all outlets and grounded in accordance with the NEC.
 2. Run all exposed conduit parallel to building walls using right angle bends. Exposed diagonal runs of conduit will not be permitted. Do not install conduit on roof surfaces unless specifically indicated on the Drawings.
 3. Ream conduit after threads are cut. Cut ends square and butt solidly into couplings.
 4. Prevent the accumulation of water, foreign matter, or concrete in the conduits during the execution of the work. Temporarily plug conduit, blowout, and swab before wires are pulled.
 5. Fasten conduits to all sheet metal boxes and cabinets with two locknuts in accord with the NEC where insulated bushings are used and where bushings cannot be brought into firm contact with the metal enclosures; otherwise, use at least a single locknut and bushing.
 6. Seal each underground joint and make water-tight.
 7. Where building construction or other conditions make it impossible to use standard threaded couplings, install water-tight, threaded unions.
 8. Make changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with conduit bending machine to avoid changing the internal diameter of the conduit and not damage its protective coating either inside or outside. Individual bends shall not exceed 90 degrees, and not more than 270 degrees total bends will be allowed in any one conduit run. Where more bends are

necessary, and conduit runs exceed 150 lin. ft, install a suitable pull box or junction box.

9. Provide empty conduits installed with a pull wire. Pull wire shall be No. 14 AWG, zinc-coated steel or of plastic having not less than 200 lb. tensile strength. Leave not less than 12 in. of slack at each end of the pull wire.
10. Use liquid-tight, flexible metal conduit for final connection to motors, constant current regulators, transformers, portable equipment, and for equipment subject to vibration and noise transmission. For each conduit size up to 1-in. trade size, flexible conduit shall be minimum length of 12 in. and a maximum length of 36 in. and for conduit sizes above 1-in. trade size, flexible conduit shall be minimum length of 20 in. and maximum length of 48 in. Liquid-tight flexible metal conduit and associated fitting shall be UL listed to meet the requirements of NEC 350.6. Liquid-tight flexible metal conduit that is used for flexibility (including connections to motors, constant current regulators, and transformers) shall require an external bonding jumper or internal equipment grounding conductor per NEC 350.60. Do not install liquid-tight flexible metal conduit that is not UL listed.
11. Provide duct seal at conduit terminations inside enclosures where the respective conduit is from below grade.
12. All enclosures rated NEMA 4, 4X shall have watertight hubs at conduit entrances UL listed NEMA 4, 4X for the respective enclosure to maintain the NEMA 4, 4X rating. Provide NEMA 4 hubs at conduit entrances for equipment rated NEMA 3R to maintain a watertight seal.

C. Raceway Support and Hangers:

1. Securely fasten raceways in-place and support from ceiling or walls at spacing not exceeding:

<u>Material</u>	<u>Maximum Spacing of Supports</u>
a. ½-in. through 1-in. trade size conduit	6 ft
b. 1¼-in. through 1½-in. trade size conduit	8 ft
c. 2-in. to 4-in. trade size conduit	10 ft
d. Liquid-tight, flexible metal conduit	4½ ft
e. Metal wireway	10 ft

2. Support rigid conduits within 3 ft of every outlet box, junction box, pull box, cabinet, or termination. Support flexible conduit within 12 in. on each side of every outlet box or fitting.
3. Support conduits by pipe straps, wall brackets, hangers, or ceiling trapeze. The use of perforated iron or wire for supporting conduits is prohibited. Fasten with wood screws or screw nails to wood; by toggle

bolts on hollow masonry units, by concrete inserts, or expansion bolts on concrete or spring-tension or threaded C-clamps for rigid steel conduits on steel. Do not weld conduits or pipe straps to steel structures unless specifically indicated.

4. The load applied to fasteners shall not exceed one-third the proof test load of the fasteners.
5. Fasteners attached to concrete shall be vibration and shock-resistant.
6. All screws, bolts, washers, and miscellaneous hardware used for conduit supports shall be fabricated from rust-resisting metal. Trapeze hangers shall have hanger assemblies protected with galvanized finish.

D. Hazardous Locations

1. Per NEC 513, aircraft hangars are classified as a Class I, Division 2, Group D hazardous location for a level of 18 in. above the floor for the entire area of the hangar. Per NEC 513.3(C) "Vicinity of Aircraft" the area within 5 ft horizontally from aircraft power plants or aircraft fuel tanks shall be classified as a Class I, Division 2 location that shall extend upward from the floor to a level 5 ft above the upper surface of wings and of engine enclosures. All electrical installations in the hangar shall conform to the applicable sections of NEC 500, 501, and 513 in addition to the other applicable sections of NEC. Where electrical equipment is installed in a classified hazardous location it shall be suitable for use in the respective classified hazardous location. Where possible, avoid installation of electrical equipment, raceways, and wiring in the classified hazardous areas of this facility.
2. Electrical equipment installed at the fuel tank and dispenser site in classified hazardous locations (Class I, Division 1 or 2, Group D) shall be approved and listed suitable for the respective hazardous environment and shall conform to the applicable sections of the NEC, most current issue in force, including but not limited to Articles 500, 501, 504, 514, and 515.
3. Perform all work in classified hazardous locations as defined by the NEC in strict accordance with the NEC for the particular "Class", "Division", and "Group" of hazardous locations involved or indicated on the Drawings. Provide conduit and cable seals in accordance with the NEC.
4. All conduits installed in classified hazardous locations (including Class I, Division 1 or 2, Group D) shall be suitable for the respective location. All boxes and fittings installed in Class I, Division 1 locations shall be approved (FM Approved or UL-listed) suitable for Class I, Division 1 locations. All boxes and fittings installed in Class I, Division 2 locations shall conform to the requirements of NEC 501.10 (B)(4).
5. Per Article 501.15 (C) (6) of the 2014 NEC and UL Standard 886, the cross sectional area for conductors installed in a conduit seal off fitting

shall not exceed 25 percent, unless the conduit seal off fitting has been specifically approved for a higher percentage of fill.

6. Install explosion-proof conduit sealing fittings in conformance with the respective manufacturer's instructions. Contact the respective seal off manufacturer if assistance is required for direction of installing packing fiber to form a dam and pouring the sealing compound.
7. Explosion-proof flexible conduit shall be provided as a connection between each motor junction box (or any other piece of equipment subject to movement or vibration) and the rigid conduit system where installed in a classified hazardous location. For Class I, Division 2 hazardous locations, liquid-tight, flexible metal conduit may be used where it is listed as approved for use in a Class I, Division 2 hazardous location.
8. EMT is not suitable for use in classified hazardous locations and, therefore, shall not be installed in classified hazardous locations."

109-3.15 WIRING AND CONNECTIONS. Add the following to this section.

"Low-voltage wiring shall maintain separation from high-voltage wiring. Low-voltage and high-voltage wiring shall not be installed in the same raceway. Low-voltage and high-voltage wiring shall not be installed in the same handhole or junction box."

109-3.16 MARKING AND LABELING. Add the following to this section:

- C. Legend plates shall be provided for all equipment. Legend plates shall be provided to identify the equipment controlled, the power source, and the function of each device. Legend plates shall be weatherproof and abrasion-resistant phenolic/plastic engraved material and fastened with contact type permanent adhesive, screws, or rivets. Installation shall not break, crack, or deform the legend plate. Lettering shall be ¼ in. high, black on a white background, unless noted otherwise.
- D. Identify control wiring at each termination point and in junction/terminal boxes with wire number corresponding to the respective control wiring diagram or respective terminal numbering arrangement. Each individual control wire shall have unique identification and shall maintain that same identification from its point of origin to its final termination point. Wire markers shall be permanent pressure sensitive label with suitable numbers or letters for easy recognition. Where new control wiring is interfaced to existing control wiring it shall also match the color coding of the existing control wiring."
- E. Each constant current regulator shall be furnished with a phenolic-engraved legend plate that identifies the regulator number designation, the runway or taxiway served, and the power source and circuit number.
- F. Each plug cutout cabinet shall be furnished with a phenolic-engraved legend plate that identifies the respective circuit or regulator and the voltage system (5000-Volts).

- G. Each individual circuit breaker, control panel, terminal panel, safety switch, panelboard, etc. shall be furnished with a phenolic-engraved legend plate that identifies the respective device, the power source, and the respective voltage, phase, and wire. Furnish additional phenolic-engraved legend plates as detailed on the Plans and/or where required by code.
- H. At electrical handholes and manholes, identify each cable originating in the vault with respect to the system or device served.
- I. Color-code phase and neutral conductor insulation for No. 6 AWG or smaller. Provide colored marking tape for phase and neutral conductors for No. 4 AWG and larger. **Insulated ground conductors shall have green colored insulation for all conductor sizes (AWG and/or KCMIL) to comply with NEC 250.119. Neutral conductors shall have white colored insulation for No. 6 AWG and smaller to meet the requirements of NEC 200.6.** Standard colors for power wiring and branch circuits shall be as follows:

120/240 VAC, 1-Phase, 3-Wire System	
Phase A	Black
Phase B	Red
Neutral	White
Ground	Green

- J. Provide legend plates to identify the vault ground bus in each room of the vault. Lettering shall be 1/2 in. high, white on a green background. Legend plate shall be labeled "VAULT GROUND BUS".
- K. Furnish and install weatherproof warning label for each meter socket, enclosed circuit breaker, disconnect switch, switchboard, cutout, panelboard, load center, motor control center, and control panel to warn persons of potential electric arc flash hazards, per the requirements of NEC 110.16 "Arc-Flash Hazard Warning". Labels shall also conform to ANSI Z535.4-2002 "American National Standard for Product Safety Signs and Labels". NEC 110.16 requires that switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked to warn qualified persons of potential arc flash hazards. The markings shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment. This new requirement is intended to help reduce the occurrence of serious injury or death due to arcing faults to those working on or near energized electrical equipment. The warning labels are to indicate to a qualified worker who intends to open the equipment for analysis of work that a serious hazard exists and that the worker should follow appropriate work practices and wear appropriate personal protective equipment (PPE) for the specific hazard. Labels shall be as detailed on the Plans or shall include at least the following information: "Warning - Potential Arc-Flash Hazards exist while working on this energized equipment. Appropriate PPE Required.

- K. Furnish and install “DANGER – HIGH VOLTAGE KEEP OUT” signs or labels on all fixed electrical equipment where potentials of 500 Volts or more terminal-to-ground are exposed (including, but not limited to, constant current regulators, series circuit cutout enclosures, high voltage junction boxes, and high voltage wireways) in accordance with FAA AC No. 150/5340-26C “MAINTENANCE OF AIRPORT VISUAL AID FACILITIES”, and National Electrical Code Article 300.45 “Warning Signs”. Place signs in a conspicuous location, usually on the outside of equipment.”

109-3.18 ELECTRICAL TESTING. Add the following:

“The installation shall be tested in operation and as a completed unit prior to acceptance. Contractor shall furnish all equipment, meters, instruments, cable connections, tools, manpower, and labor to perform the respective tests. Test all new equipment and all existing equipment where modifications take place and confirm proper operation. Coordinate tests with the respective airport personnel and the Resident Engineer/Resident Technician. Tests shall include resistance, voltage, and current reading, as applicable for the respective equipment. When tests disclose any unsatisfactory workmanship, or unsatisfactory equipment, furnished under this Contract, correct the defects and retest. Repeat tests until satisfactory results are obtained. When any wiring or equipment is damaged by tests, the wiring or equipment shall be repaired or replaced at no additional cost to the contract. Test repaired or replaced items to ensure satisfactory operation. Submit three copies of all test reports to the Engineer. All test reports shall be assembled and bound in a folder or binder. Each test report shall include the following information:

- Project number,
- Project title and location,
- Device or system tested,
- Test performed,
- Date performed,
- Test equipment used,
- Respective Contractor’s name, address, and telephone number,
- Testing firm’s name, address, and telephone number if other than the Contractor,
- Names of individuals performing tests,
- Names of individuals observing tests,
- Statement verifying each test,
- Nameplate data from respective equipment tested,
- Test results, and
- Retest results after correction of defective components or systems (where applicable).

Test the airfield lighting controls to confirm proper operation.”

Add the following:

109-3.19 GROUNDING REQUIREMENTS. Grounding shall conform to the following as applicable: The Contractor shall furnish and install all grounding shown on the Plans and/or as may be necessary or required to make a complete grounding system, as required by the latest

NEC (NFPA 70) in force. The reliability of the grounding system is dependent on careful, proper installation, and choice of materials. Improper preparation of surfaces to be joined to make an electrical path, loose joints, or corrosion can introduce impedance that will seriously impair the ability of the ground path to protect personnel and equipment and to absorb transients that can cause noise in communications circuits. The following functions are particularly important to ensure a reliable ground system:

- A. All products associated with the grounding system shall be UL-listed and labeled.
- B. All bolted or mechanical connections shall be coated with a corrosion preventative/conductive grease and lubricant suitable for electrical connections and grounding connections, before joining, Sanchem Inc. "NO-OX-ID "A-Special" compound, Burndy Penetrox E, or approved equal
- C. Metallic surfaces to be joined shall be prepared by the removal of all non-conductive material, per 2014 NEC Article 250.12. All Copper bus bars must be cleaned prior to making connections to remove surface oxidation.
- D. Metallic raceway fittings shall be made up tight to provide a permanent low impedance path for all circuits. Metal conduit terminations in enclosures shall be bonded to the enclosure with UL-listed fittings suitable for grounding. Provide grounding bushings with bonding jumpers for all metal conduits entering service equipment (meter base, CT cabinet, main service breaker enclosure, etc.), generator breaker enclosures, and automatic transfer switch enclosures. Provide grounding bushings with bonding jumpers for all metal conduits entering an enclosure through concentric or eccentric knockouts that are punched or otherwise formed so as to impair the electrical connection to ground. Standard locknuts or bushings shall not be the sole means for bonding where a conduit enters an enclosure through a concentric or eccentric knockout.
- E. Furnish and install ground rods at all locations where shown on the Plans or specified herein. Ground rods shall be 3/4-in. diameter by 10 ft. long, UL-listed, Copper-clad. Longer ground rods shall be provided where detailed on the Plans. Steel used to manufacture ground rods shall be 100 percent domestic steel to comply with the Airport Improvement Program Buy American Preference Requirements and the Steel Products Procurement Act. Ground rods shall have 10 mils minimum Copper coating. Top of ground rods shall be a minimum of 30 in. below finish grade unless otherwise noted on the Plans. Ground rods shall be spaced, as detailed on the Plans, and in no case spaced less than one-rod length apart. All connections to ground rods and/or ground rings shall be made with exothermic weld type connectors, Cadweld by Erico Products, Inc., Solon, Ohio, (Phone 1-800-248-9353), Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone 918-663-1440) or Ultraweld by Harger, Grayslake, Illinois (Phone 1-800-842-7437), or approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds as required for each respective application. Bolted connections will not be permitted at ground rods or at buried grounding electrode conductors. Grounding electrode conductors shall be bare Copper (stranded or solid) sized, as detailed on the Plans. In addition to the grounding work described herein and shown on the Plans, the Contractor shall test the made electrode ground system with an instrument specifically designed for testing ground systems. If ground resistance exceeds **25 Ohms**, contact the Project Engineer for further direction. Copies of ground system test results shall be furnished to the Resident Engineer/Resident Technician.

- F. Ground rods for the airport rotating beacon tower guy wires shall be 3/4-in. diameter, 10 ft. long, UL-listed, galvanized steel. Steel used to manufacture ground rods shall be 100 percent domestic steel to comply with the Airport Improvement Program Buy American Preference Requirements and the Steel Products Procurement Act.
- G. All connections, located above grade, between the different types of grounding conductors shall be made using UL-listed, double-compression, crimp-type connectors or UL-listed, bolted ground connectors. For ground connections to enclosures, cases, and frames of electrical equipment not supplied with ground lugs, the Contractor shall drill required holes for mounting a bolted, ground connector. All bolted, ground connectors shall be Burndy, Thomas and Betts, or equal. Tighten connections to comply with tightening torques in UL Standard 486A to assure permanent and effective grounding.
- H. All metal equipment enclosures, conduits, cabinets, boxes, receptacles, etc. shall be bonded to the respective grounding system. Provide grounding bushings at all conduits entering service entrance equipment (meter bases, service disconnects, service panelboards, etc.) and distribution panels or load centers and ground wire from bushing to ground bus in the respective service entrance equipment or distribution panel.
- I. Each feeder circuit and/or branch circuit shall include an equipment ground wire. Metal raceway or conduit shall not meet this requirement. The equipment ground wire from equipment shall not be smaller than allowed by 2014 NEC Table 250.122 "Minimum Size Conductors or Grounding Raceway and Equipment." When conductors are adjusted in size to compensate for voltage drop, equipment-grounding conductors shall be adjusted proportionately according to circular mil area. All equipment ground wires shall be Copper, either bare or insulated green in color. Where the equipment grounding conductors are insulated, they shall be identified by the color green, and shall be the same insulation type as the phase conductors.
- J. Bond the main electrical service neutral to ground at the main service disconnect. Bond the service neutral to ground at one location only per the NEC. A grounding connection shall not be made to any neutral circuit conductor on the load side of the service disconnecting means, except as permitted by 2014 NEC 250.24.
- K. The secondary neutral of all transformers (separately derived system transformers) shall be grounded in accordance with the NEC. The respective grounding electrode conductor shall be connected to the neutral point of the transformer between the transformer and the output disconnecting means. Size of the grounding electrode conductor shall be in accordance with 2014 NEC Article 250.66 and Table 250.66 unless shown larger on the Drawings. A bond shall be provided between the neutral and transformer case, or other metal that is part of the AC equipment grounding system, so as to complete a circuit for fault current to the transformer winding from the AC equipment grounding system. Size of the neutral bonding conductor shall be in accordance with 2014 NEC Article 250.102.
- L. All exterior metal conduits, where not electrically continuous because of manholes, handholes, non-metallic junction boxes, etc., shall be bonded to all other metal conduit in the respective duct run, and at each end, with a Copper-bonding jumper sized in conformance with 2014 NEC 250.102. Where metal conduits terminate in an enclosure (such as a motor control center, switchboard, etc) where there is not electrical continuity with the conduit and the respective enclosure, provide a bonding jumper from the respective enclosure ground bus to the conduit sized per 2014 NEC 250.102.

- M. Install grounding electrode conductors and/or individual ground conductors in Schedule 40 or Schedule 80 PVC conduit. Where grounding electrode conductors or individual ground conductors are run in PVC conduit, do not completely encircle conduit with ferrous and/or magnetic materials. Use non-metallic, reinforced fiberglass strut support. Where metal conduit clamps are installed, use nylon bolts, nuts, washers, and spacers to interrupt a complete metallic path from encircling the conduit.
- N. Individual ground conductors and/or grounding electrode conductors shall not be run in metallic conduit and shall not be encircled by metallic clamps. If local codes dictate that grounding conductors must be run in metal conduit or raceway, then the conduit or raceway must be bonded to the grounding conductor at both ends with a bonding jumper sized in accordance with the NEC 250.64(E). All such installations requiring individual grounding conduits to be run in metal conduit or raceway shall be verified and reviewed with the Resident Engineer/Resident Technician. This does not apply to AC equipment ground wires run with AC circuits.
- O. Furnish and install #2 AWG bonding jumpers between the respective building steel skids and the vault ground ring for pre-engineered equipment enclosure building with concrete floor and steel skid structure. Connections to the ground ring and to the steel skids shall be exothermic weld-type connections. Provide one connection to each skid member associated with the respective building.

109-3.20 RESTORATION. Any and all trenches and disturbed areas will be backfilled and restored to a smooth grade and seeded to the satisfaction of the Engineer. All trench settlement or disturbed areas shall be corrected for a period of one year. Restoration, grading, and seeding of areas disturbed during the installation of the proposed vault work and/or vault removal work will be incidental to the respective 109 Pay Item. All fencing removal and restoration associated with the installation of the vault shelter will be considered incidental to Item AR109110 Erect Prefabricated Vault and no additional compensation will be allowed.

METHOD OF MEASUREMENT

109-4.1. Delete this section.

109-4.2. Revise this section to read as follows:

“The quantity of prefabricated equipment shelters to be paid for under Item AR109110 Erect Prefabricated Vault shall consist of the number of shelters constructed in place and accepted as a complete unit. This item shall consist of furnishing and installing a pre-fabricated equipment shelter, its concrete piers or concrete slab, the concrete pad under and around the shelter, and concrete step/pad/sidewalk at entry, as applicable in accordance with this Specification at the location, design, and dimensions shown on the Construction Plans. This item shall include the sidewalk from the parking lot to the vault. This item shall include all fencing removal and restoration associated with the installation of the vault shelter. This item shall include all labor, equipment, materials, coordination, installation, testing, and the furnishing and installation of all incidentals necessary to produce a completed vault building and place it in operating condition.”

109-4.3. Add the following to this section:

“The quantity of vault equipment to be paid for under Item AR109200 Install Electrical Equipment shall consist of furnishing and installing all mechanical and electrical equipment at the vault, as detailed on the Plans and specified herein. This item shall include all labor, equipment, surge protection, grounding, materials, tools, operational instructions, coordination, and testing required to place the vault and associated electrical equipment into proper working order. Cables, conduits, equipment, support hardware, and grounding associated with the new electric service to the vault shall be considered incidental to this item, and no additional compensation will be allowed. Cables inside or at the Airport Electrical Vault Building shall be considered incidental to this item, and no additional compensation will be allowed. Conduit entries, elbows, and fittings located at, adjacent to, or beneath the vault shall be considered incidental to this item, and no additional compensation will be allowed. Relocation of the existing constant current regulators from the existing vault or respective storage location to the new vault shall be considered incidental to this item, and no additional compensation will be allowed.

- A. Furnishing and installing new electric service and/or feeders to the vault will be considered incidental to this item, and no additional compensation will be allowed.
- B. Relocating existing fuel system equipment and panels from the existing vault to the new vault along with associated conduit, junction boxes and wiring will be considered incidental to this item, and no additional compensation will be allowed.
- C. Furnishing and installing a new safety switch for the airport rotating beacon with associated conduit, wiring, and grounding will be considered incidental to this item, and no additional compensation will be allowed. The conduit from the low voltage handhole near the beacon tower to the new safety switch at the airport rotating beacon tower shall be included with Item AR109200.
- D. Furnishing and installing the L-854 radio antenna on the beacon tower with the associated antenna cable and conduit from the vault to the tower will be considered incidental to this item, and no additional compensation will be allowed.
- E. Grounding for the beacon tower guy wires will be considered incidental to this item, and no additional compensation will be allowed.
- F. Electrical Handholes will be paid for separately under item AR110610 Electrical Handhole – per each.
- G. Electrical Manholes will be paid for separately under item AR110710 Electrical Manhole – per each.

109-4.4. The quantity of Remove Electrical Vault to be paid for under Item AR109901 “Remove Electrical Vault” shall consist of removal of existing vault shelter, foundation, and all equipment and associated wire and raceway located in the existing vault as detailed on the Plans and specified herein. The existing constant current regulators shall be relocated to the new vault (as detailed on the Plans). The existing fuel system equipment and panels shall be relocated to the new vault. All other equipment to be removed shall be turned over to the Owner. In the event that the Owner does not want the respective equipment, the Contractor shall dispose of that

respective equipment in a legal manner off of the airport property. Removal of vault equipment shall include the removal of the existing electric equipment, conductors and conduit, service and feeder conductors to the existing vault, and the associated coordination. This item shall include all labor, equipment, tools, excavating, disposal, utility coordination, and incidentals required to complete this item of work. Removal of vault equipment shall also include backfill, furnishing earth material, seeding, mulching and grading to restore the respective areas affected by the removal work.

BASIS OF PAYMENT

109-5.1. Add the following:

“Payment will be made under:

Item AR109110 Erect Prefabricated Vault - per lump sum
Item AR109200 Install Electrical Equipment - per lump sum
Item AR109901 Remove Electrical Vault - per lump sum”

END OF ITEM 109

ITEM 110 INSTALLATION OF AIRPORT UNDERGROUND ELECTRICAL DUCT

DESCRIPTION

110-1.1 Add the following:

“This item of work shall consist of the installation of all proposed conduits and ducts as shown on the Construction Plans.”

110-1.2 REFERENCES

- A. ANSI C80.1 – Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.4 – Fittings Rigid Metal Conduit and EMT.
- C. ASTM D3350 – Specification of Polyethylene Plastics Pipe and Fittings Materials.
- D. ASTM F2160 – Standard Specification for Solid Wall, High-Density Polyethylene Conduit Based on Controlled Outside Diameter.
- E. NEMA TC-2 – Electrical Plastic Tubing and Conduit.
- F. NEMA TC-3 – Fittings Rigid PVC Conduit and Tubing.
- G. NEMA Specification TC-7 – Smooth-Wall Coilable Polyethylene Electrical Plastic Conduit.
- H. NFPA 70 – National Electrical Code (NEC), most current issue in force.
- I. UL Standard 6 – Rigid Metal Conduit.
- J. UL Standard 514B – Conduit, Tubing and Cable Fittings.
- K. UL Standard 651 – Schedule 40 and 80 Rigid PVC Conduit.
- L. UL Standard 651B – Standard for Continuous Length High-Density Polyethylene (HDPE) Conduit.

110-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for each type of conduit or duct to be used on the project. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus 4 copies to be retained by the Project Engineer. Contractor may submit electronic copies of shop drawings instead of hard copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings**

submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America from Domestic materials in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the Airport Improvement Program Buy American Preferences requirements.

- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials and equipment.
- C. Indicate the pay item number for each respective conduit or duct.
- D. Shop drawings shall include conduit and/or duct cut sheets with type, size, specifications, UL listing, manufacturer, and catalog or part number.
- E. Provide manufacturer's literature confirming the respective duct to be bored is suitable for directional boring with the respective Shop Drawing submittal.
- F. Provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.
- G. Provide certification that the respective plastic conduits used on this project are manufactured from domestic materials.

EQUIPMENT AND MATERIALS

110-2.1 GENERAL. Add the following:

"All materials for these items shall be in accordance with the FAA Standard Specification 110 Equipment and Materials, as detailed on the Plans, and as specified herein.

- A. Conduit for concrete encased duct shall be Schedule 40 (minimum) Polyvinyl Chloride (PVC) or Schedule 40 (minimum) High-Density Polyethylene (HDPE), sized as detailed on the Plans, and suitable for concrete encasement.
- B. The duct to be directional-bored shall be Galvanized Rigid Steel Conduit (GRSC) duct, Schedule 40 PVC Conduit, Schedule 80 PVC Conduit or High-Density Polyethylene (HDPE) duct, (Schedule 40, Schedule 80, SDR 9, SDR 11, or SDR 13.5), and suitable for directional boring installation.
- C. Item AR110202 2" PVC Duct, Direct Bury shall be 2-inch PVC Schedule 40 (minimum wall thickness) duct, 2-inch High-Density Polyethylene (HDPE) Schedule 40 (minimum wall thickness) duct, or 3-inch HDPE SDR 13.5 (minimum wall thickness) duct, and suitable for direct burial in earth."

- D. Item AR110203 3" PVC Duct, Direct Bury shall be 3-inch PVC Schedule 40 (minimum wall thickness) duct, 3-inch High-Density Polyethylene (HDPE) Schedule 40 (minimum wall thickness) duct, or 3-inch HDPE SDR 13.5 (minimum wall thickness) duct, and suitable for direct burial in earth."

110-2.2 STEEL CONDUIT. Replace this section with the following:

"Rigid Steel Conduit and fittings shall be hot-dipped, galvanized, UL-listed, and produced in accordance with UL Standard 6 – Rigid Metal Conduit and ANSI C80.1 – Rigid Steel Conduit, Zinc Coated. Couplings, connectors, and fittings for rigid steel conduit shall be threaded, galvanized steel or galvanized, malleable iron, specifically designed and manufactured for the purpose. Fittings shall conform to ANSI C80.4 – Fittings Rigid Metal Conduit and EMT and UL 514B – Conduit, Tubing, and Cable Fittings. Set screw type fittings are not acceptable. Steel used to manufacture conduits shall be 100 percent domestic steel to comply with the Airport Improvement Program Buy American Preference Requirements and the Steel Products Procurement Act. Contractor shall provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.

Miscellaneous Fittings. Fittings shall be suitable for use with conduits and ducts supplied. All fittings for use with rigid metal conduit shall be threaded. Set screw-type fittings are not acceptable. All conduit bodies, fittings, and boxes installed in classified hazardous locations (Class I, Division 1 or 2, Group D) shall be suitable for use in Class I, Division 1, and Group D locations. Fittings shall be as manufactured by Appleton, Crouse-Hinds, Hubbell-Killark, O-Z/Gedney, or approved equal."

110-2.3 PLASTIC CONDUIT. Add to this section:

"Conduits shall be suitable for underground applications encased in concrete or direct burial, and suitable for exposed applications aboveground.

- A. Conduits for concrete encasement shall be Schedule 40 PVC, UL-listed, rated for 90°C cable, conforming to NEMA Standard TC-2 and UL 651, listed suitable for concrete encasement or Schedule 40 (minimum) HDPE conduit, UL-listed, conforming to NEMA Standard TC-7 and UL 651B and listed suitable for concrete encasement.
- B. Conduits for directional boring shall be Schedule 40 PVC or Schedule 80 PVC conduit, UL-listed, rated for 90°C cable-conforming to NEMA Standard TC-2 and UL 651 and suitable for directional boring installation, Schedule 40 HDPE or Schedule 80 HDPE conduit, UL-listed, conforming to NEMA Standard TC-7 and UL 651B and suitable for directional boring installation, or Wall Type SDR 9, SDR 11, or SDR 13.5 HDPE conduit manufactured in accordance with ASTM D-3350 (Specification of Polyethylene Plastics Pipe and Fittings Materials) and ASTM F2160 (Standard Specification for Solid Wall, High-Density Polyethylene Conduit Based on Controlled Outside Diameter), and suitable for directional boring installation. **Per NEC 300.5 (K), raceways installed using directional boring equipment shall be approved for the purpose. Provide manufacturer's literature confirming the respective duct is suitable for directional boring with the respective Shop Drawing submittal.**
- C. Conduits for direct burial in earth shall be PVC Schedule 40 (minimum wall thickness), UL-listed, rated for 90°C cable-conforming to NEMA Standard TC-2 and UL 651, listed

suitable for direct burial in earth, or HDPE Schedule 40 (minimum wall thickness), conforming to NEMA Standard TC-7 and UL 651B, or HDPE SDR 13.5 (minimum wall thickness) manufactured in accordance with ASTM D-3350 (Specification of Polyethylene Plastics Pipe and Fittings Materials) and ASTM F2160 (Standard Specification for Solid Wall, High-Density Polyethylene Conduit Based on Controlled Outside Diameter). Conduits shall be suitable for direct burial in earth and/or concrete encasement.”

110-2.9 DUCT SPACERS. Provide duct spacers to provide proper separation of conduits installed in concrete encased duct. Duct spacers shall be designed to provide 3” separation of conduits. Duct spacers shall be Underground Devices Incorporated Wunpeece Series suitable for the respective size and quantity of ducts, or approved equal. Contact information for Underground Devices Incorporated is address: 3304 Commercial Avenue, Northbrook, Illinois 60062, Phone: (847) 205-9000, Fax: (847) 205-9004. Confirm catalog numbers with the manufacturer for the respective application.

CONSTRUCTION METHODS

110-3.1 GENERAL. Add to this section:

“The proposed conduits and ducts shall be constructed at the locations and in accordance with the details shown on the Construction Plans. Ducts shall be installed 18 in. minimum below grade. Ducts located in area subject to farming shall be 42 in minimum below grade. Where detailed on the Plans or where required to avoid obstructions, ducts shall be buried deeper. Where concrete-encased duct interfaces to directional-bored duct at a pavement crossing, the concrete encasement shall be installed up to the respective pavement edge. Where concrete-encased duct interfaces to an electrical handhole or manhole, the concrete encasement shall be installed up to the respective handhole or manhole. Provide bushings or bells at conduit terminations in electrical handholes or manholes.

Underground ducts installed by directional-boring method shall be installed in a manner that will not damage any existing underground utilities, and shall not disturb or damage the respective pavement or roadway surface. Ducts shall be directional-bored at the locations shown on the Construction Plans. The ducts will be bored at a minimum depth of 24 in. below the bottom of the pavement it is being bored under. Ducts installed under paved areas and roadways shall extend a minimum of 10 ft beyond the respective pavement or roadway surface, unless detailed otherwise on the Plans. A pull wire will be left in the conduit if it is to be left vacant. The ends of the conduit will be sealed with approved plugs.

The Contractor will determine if there is a conflict between the installation of the proposed electrical ducts and any existing/proposed utilities. He will make all necessary adjustments in depth of installation to avoid any and all existing/proposed underground improvements.”

110-3.7 RESTORATION. Add to this section:

“Any and all trenches and disturbed areas will be backfilled and restored to a smooth grade and seeded to the satisfaction of the Engineer. All trench settlement shall be

corrected for a period of one year. Restoration, grading, and seeding of areas disturbed during the installation of the proposed ducts will be incidental to the respective pay item for which the duct is installed. The fertilizing and seeding will be completed in accordance with Items 901 and 908, but will be incidental to the respective pay item for which the duct is installed.

Any and all disturbed pavement areas will be restored to original or better condition. Restoration of pavement areas disturbed during the installation of the proposed ducts will be incidental to the respective pay item for which the duct is installed. The restoration of pavement will be completed in accordance with Item 610 for sidewalks and concrete pavement, and Item AR401910 Remove & Replace Bituminous Pavement for bituminous pavement, but will be incidental to the respective pay item for which the duct is installed.”

Add the following:

110-3.8 LOCATING OF EXISTING UNDERGROUND UTILITIES AND CABLES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor’s responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain from the respective utility companies detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner’s Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract.

All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

Contractor shall locate and mark all existing cables within ten (10) feet of proposed excavating/trenching area. Any cables found interfering with proposed excavation or cable/trenching shall be hand dug and exposed. Any damaged cables shall be immediately repaired to the satisfaction of the Resident Engineer/Resident Technician at the Contractor’s expense. The Resident Engineer/Resident Technician and Owner shall be notified immediately if any cables are damaged.

Payment for locating and marking underground utilities and cables will not be paid for separately, but shall be considered incidental to the respective duct installation.

110-3.9 SEPARATION OF HIGH-VOLTAGE AND LOW-VOLTAGE WIRING. High-voltage circuit wiring (airfield lighting 5000 Volt series circuits and/or other circuits rated above 600 Volts) and low-voltage circuit wiring (rated 600 Volts and below) shall maintain separation from each other. High-voltage wiring and low-voltage wiring shall not be installed in the same wireway, conduit, duct, raceway, handhole, or junction box.

METHOD OF MEASUREMENT

110-4.1. Add the following:

“The quantity of conduit to be paid for shall be the number of linear feet of ducts of the particular type installed and measured in-place, complete, and accepted by the Engineer.”

BASIS OF PAYMENT

110-5.1. Add the following:

“Payment will be made at the contract unit price per each type and size of conduit, completed and accepted. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; for all duct interface work to handholes/manholes including coring of handholes/manholes; for all excavation and backfilling with aggregate backfill, earth backfill, and concrete; and for all labor, coordination, equipment, tools, and incidentals necessary to complete this Item. Removal and replacement of bituminous pavement will be considered incidental to the respective pay item for which the duct is installed.”

Payment will be made under:

Item AR110013 3" Directional Bore - per linear foot
Item AR110202 2" PVC Duct, Direct Bury - per linear foot
Item AR110203 3" PVC Duct, Direct Bury - per linear foot
Item AR110504 4-Way Conc. Encased Duct - per linear foot”

END OF ITEM 110

ITEM 115
ELECTRICAL MANHOLES AND JUNCTION STRUCTURES

DESCRIPTION

115-1.1. This item of work shall consist of electrical manholes and junction structures (handholes and splice cans) in accordance with this Specification and as detailed on the Construction Plans. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the Engineer.

115-1.2. SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for each type of electrical manhole and junction structure to be used on the project. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus 4 copies to be retained by the Project Engineer. Contractor may submit electronic copies of shop drawings instead of hard copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the AIP Buy American Preferences requirements.**
- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials and equipment.
- C. The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Engineer reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.
- D. Concrete mix design for handholes to be cast in place.
- E. Precast concrete handholes and manholes must be on IDOT (Illinois Department of Transportation) List of Certified Precast Concrete Producers. Provide information on

respective precast concrete producer for precast manholes and drawings for respective handholes.

- F. Provide cut sheets with part number and specification for each handhole frame and lid. Include certification that the respective handhole frame and lid is made in the United States of America.
- G. Provide certification that the respective pre-cast handholes and manholes are manufactured in the United States of America.

MATERIALS

115-2.1. GENERAL

- A. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when so requested by the Engineer.
- B. Manufacturer's certifications shall not relieve the Contractor of the Contractor's responsibility to provide materials in accordance with these specifications and acceptable to the Engineer. Materials supplied and/or installed that do not materially comply with these specifications shall be removed, when directed by the Engineer and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.
- C. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

115-2.2 CONCRETE STRUCTURES. Provide precast concrete structures where shown on the Plans. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. Openings or knockouts shall be provided in the structure as detailed on the Plans and as applicable to interface to the respective duct system. Threaded inserts and pulling eyes shall be cast in as shown.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the Engineer shall be submitted by the Contractor to allow for a full evaluation by the Engineer.

- A. 4' x 4' x 4' Electrical Manholes. 4' x 4' x 4' electrical manholes shall be constructed in accordance with the details as shown on the Construction Plans. The manhole shall be provided with manhole frame and lid capable of withstanding minimum 50,000-pound loads, NEENAH Foundry Company R-1640-C frame and lid, or an approved equal. Lids for the manholes containing high voltage airfield lighting cables shall include lettering labeled "**DANGER HIGH VOLTAGE KEEP OUT 5000 VOLTS**" to comply with NEC Article 300.45 "Warning Signs" and NEC Article 314.30(D) "Covers". Lids for the manholes containing low voltage cables (600 Volts and below) shall include lettering labeled "**LOW-VOLTAGE**". 4' x 4' x 4' electrical manholes shall be manufactured by a concrete electrical manhole producer

on the Illinois Department of Transportation approved list of certified precast concrete producers. 4' x 4' x 4' electrical manholes will be paid for under Item AR110710 Electrical Manhole per each.

- B. Electrical Handholes. Each electrical handhole shall be constructed in accordance with the details as shown on the Construction Plans. The concrete shall conform to Item 610. The handholes shall be provided with heavy duty square slab type manhole frames and solid lids suitable for 40,000 pound loading, NEENAH R-6662-PP frame and lid, or an approved equal. Lids for the handholes containing high voltage airfield lighting cables shall include lettering labeled "**DANGER HIGH VOLTAGE KEEP OUT 5000 VOLTS**" to comply with NEC Article 300.45 "Warning Signs" and NEC Article 314.30(D) "Covers". Lids for the handholes containing low voltage cables (600 Volts and below) shall include lettering labeled "**LOW-VOLTAGE**". Coordinate lettering with manufacturer. Precast electrical handholes shall be manufactured by a concrete electrical handhole producer on the Illinois Department of Transportation approved list of certified precast concrete producers. Electrical handholes will be paid for under Item AR110610 Electrical Handhole per each.

115-2.3 JUNCTION CANS. Junction Cans shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) cans encased in concrete. The cans shall have a galvanized steel blank cover, gasket, and stainless steel hardware. Covers shall be 3/8" thickness for L-867 and 3/4" thickness for L-868. Include internal and external ground straps on each splice can.

115-2.4 CABLE TRAYS. Cable racks shall be as detailed on the Plans.

115-2.5 GROUND RODS. Furnish and install ground rods at locations where shown on the Plans or specified herein. Provide ground rods in manholes and/or handholes where applicable for termination of ground conductors. Provide ground rods for splice cans as detailed on the Plans. Ground rods for splice cans shall be 3/4-inch diameter, 10 feet long, UL-listed, copper-clad. Longer ground rods shall be provided where detailed on the Plans. Ground rods shall have 10 mils minimum copper coating. Steel used to manufacture ground rods shall be 100 percent domestic steel to comply with the Airport Improvement Program Buy American Preference Requirements and the Steel Products Procurement Act. Contractor shall provide certification that the respective ground rods used on this project are manufactured from 100 percent domestic steel.

CONSTRUCTION METHODS

115-3.1. Electrical handholes and manholes shall be constructed in accordance with the details as shown on the Construction Plans. At electrical handholes and manholes, identify and label each cable with respect to its origin and the system or device served. Coordinate conduit and duct interface with the handhole and/or manhole installation. Field cut openings for conduits and ducts according to the respective handhole and/or manhole manufacturer's recommendations. Core drill and/or cut wall of handhole and/or manhole with a tool designed for the material to be cut and suitable for the respective application. Size holes for termination fittings to be used and seal around penetrations after fittings are installed.

115-3.2 UNCLASSIFIED EXCAVATION. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the Engineer without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to the respective handhole and/or manhole structure pay item of which it is a component part. Dewatering necessary for manhole structure installation, erosion and turbidity control, in accordance with Federal, State, and Local requirements is incidental to its respective pay item. The cost of all excavation regardless of type of material encountered, shall be included in the unit price bid for the respective manhole structure pay item.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the Resident Engineer/Resident Technician. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the Resident Engineer/Resident Technician. Structures shall be placed after the Resident Engineer/Resident Technician has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 in of sand or a material approved by the Resident Engineer/Resident Technician as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the Plans.

115-3.2 CONCRETE STRUCTURES. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item 610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the Engineer before the concrete is placed.

115-3.3 PRECAST UNIT INSTALLATIONS. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 PLACEMENT AND TREATMENT OF CASTINGS, FRAMES AND FITTINGS. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the Resident Engineer/Resident Technician and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written permission is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the Resident Engineer/Resident Technician and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 INSTALLATION OF LADDERS. [Not used]

115-3.6 REMOVAL OF SHEETING AND BRACING. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The Resident Engineer/Resident Technician may order the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 BACKFILLING. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the Resident Engineer/Resident Technician.

Backfill shall not be placed against any structure until permission is given by the Resident Engineer/Resident Technician. In the case of concrete, such permission shall not be given until tests made by the laboratory under supervision of the Engineer establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the Resident Engineer/Resident Technician may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of

the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 CONNECTION OF DUCT BANKS. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 RESTORATION. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, seeding, mulching grading and restoration shall be considered incidental to the respective pay item. The Contractor shall grade around structures as required to provide positive drainage away from the structure. Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials. After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.10 LOCATING EXISTING UNDERGROUND UTILITIES AND CABLES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain from the respective utility companies detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract.

All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

Contractor shall locate and mark all existing cables within ten (10) feet of proposed excavating/trenching area. Any cables found interfering with proposed excavation or cable/trenching shall be hand dug and exposed. Any damaged cables shall be immediately repaired to the satisfaction of the Resident Engineer/Resident Technician at the Contractor's expense. The Resident Engineer/Resident Technician and Owner shall be notified immediately if any cables are damaged.

Due to the quantities of existing utilities and lines in the proposed areas of work, the Contractor will need to carefully excavate to expose and protect these utilities and lines

prior to installing manholes, handholes, and/or junction structures and the associated trenches for the proposed conduits, ducts, and raceway system.

Payment for locating and marking underground utilities and cables will not be paid for separately, but shall be considered incidental to the respective duct installation.

115-3.11 SEPARATION OF HIGH-VOLTAGE AND LOW-VOLTAGE WIRING. High-voltage circuit wiring (airfield lighting 5000 Volt series circuits and/or other circuits rated above 600 Volts) and low-voltage circuit wiring (rated 600 Volts and below) shall maintain separation from each other. High-voltage wiring and low-voltage wiring shall not be installed in the same wireway, conduit, duct, raceway, handhole, or junction box.

METHOD OF MEASUREMENT

115-4.1. Electrical manholes, handholes and junction structures shall be measured by each unit completed in place and accepted by the Resident Engineer/Resident Technician. The following additional items are specifically included in each unit.

- All required excavation,
- Sheeting and bracing
- All required backfilling with on-site materials
- Restoration of all surfaces and finished grading, sodding
- All required connections
- Dewatering if required
- Temporary cables and connections
- Ground rod testing
- All coring and labor associated with conduit, duct, cable in unit duct, and/or cable entries
- Locating existing utilities, lines, and cables in the respective areas of work
- All coordination with the respective Airport staff, site personnel, and/or FAA personnel

BASIS OF PAYMENT

115-5.1. Payment will be made at the contract unit price bid for each electrical manhole, handhole, and/or junction structure completed and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling, and placing of the materials; for locating existing utilities, lines, and cables in the respective areas of work; for all coring and labor associated with conduit, duct, cable in unit duct, and/or cable entries; for all coordination with the respective Airport and/or FAA personnel; for furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

Item AR110610 Electrical Handhole - per each
Item AR110710 Electrical Manhole - per each

END OF ITEM 115

**ITEM AR125615
PAPI (L-880 SYSTEM)**

DESCRIPTION

125615-1.1 This item of work shall consist of furnishing and installing Precision Approach Path Indicators (PAPI's) at the locations shown on the Construction Plans. Each installation will be in accordance with the details on the Plans and these Special Provisions. Also included in this item will be the testing of the installation and all incidentals necessary to place the respective PAPI system into proper operation and to the satisfaction of the Engineer.

125615-1.2 REFERENCES

- A. ANSI C80.1 – Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.4 – Fittings Rigid Metal Conduit and EMT.
- C. FAA AC No. 150/5340-30H “DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS.”
- D. FAA AC No. 150/5345-28G (or most current issue in effect) “PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS”
- E. FAA AC 150/5345-42G “Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories” (or most current issue in effect).
- F. FAA AC No. 150/5345-53 “AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM” (most current issue) and AC150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum.
- G. FAA AC No. 150/5370-2F (or most current issue) “OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
- H. NFPA 70 – National Electrical Code (most current issue in force).
- I. NFPA 70E – Standard for Electrical Safety in the Workplace
- J. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures
- K. UL Standard 6 – Rigid Metal Conduit.
- L. UL Standard 467 – Grounding and Bonding Equipment.
- M. UL Standard 486A-486B Wire Connectors.
- N. UL Standard 514B – Conduit, Tubing and Cable Fittings.

125615-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for PAPI units and materials to be used on the project. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus 4 copies to be retained by the Project Engineer. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the AIP Buy American Preferences requirements. FAA approved equipment that is on the FAA Buy American Conformance List or the list of Nationwide Buy American Waivers Issued by the FAA complies with the AIP Buy American Preferences and will not require additional waiver paperwork for AIP projects. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/media/nationwideBuyAmericanWaiversIssued.pdf for a list of Nationwide Buy American Waivers Issued by the FAA.**
- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials and equipment.
- C. Cut sheets with part number and specifications for PAPI system.
- D. Concrete mix design.
- E. Provide cut sheets for L-867 light bases.
- F. Provide cut sheets with manufacturer's name, catalog number, dimensions, material and UL listing for each type and size ground rod. Include certification of 100% domestic steel for ground rods. Include cut sheets for exothermic weld connections, ground lugs, and ground wire.
- G. Provide cut sheets for all types of conduit used with the PAPI installation (for example galvanized rigid steel conduit). Include certification that steel conduits are made with 100 percent domestic steel.

MATERIALS

125615-2.1 PAPI UNITS. The proposed PAPI units shall be a Type L-880 system consisting of four (4) light housing assembly units (each containing either two (2) light channels and two (2)

lamps or three (3) light channels and three (3) lamps), Style "B" (Current powered series lighting circuit system), Class I qualified to -35 degrees Centigrade, and all accessories as per FAA AC 150/5345-28G and approved by the FAA AC 150/5345-53D, or latest revision. Include isolation transformer consolidating harnesses for Style B systems. Baffles will be required to set the limits of the obstacle clearance surface to 10 degrees either side of the runway centerline (20 degrees total) to restrict excess horizontal light distribution, in accordance with FAA AC 150/5340-30H, Part 7.7 Installation, f. PAPI, (7)(c).

125615-2.2 AIMING AND CALIBRATION EQUIPMENT. Furnish one clinometer (aiming and calibration device) with the PAPI units for each respective runway. Aiming and calibration equipment will be incidental to the PAPI units.

125615-2.3 SERIES CIRCUIT POWER CABLE. Power cables from the respective power source constant current regulator to the respective PAPI installation and between PAPI lighting units shall be FAA L-824, 5,000 Volt, Type C copper cable and shall conform to the requirements of FAA Advisory Circular 150/5345-7E, (or latest edition) "SPECIFICATIONS FOR L-824 UNDERGROUND ELECTRICAL CABLE FOR AIRPORT LIGHTING CIRCUITS".

125615-2.4 TILT SWITCH CONTROL CABLE. Control cable shall be as recommended by the respective PAPI manufacturer and in accordance with the applicable requirements of National Electrical Code for the respective application. Tilt switch control cable shall be MIL-W-16878 Military hook-up wire with 3,000 Volt, 105 degree C insulation or approved equal. Size shall be in accordance with the respective PAPI manufacturer's recommendation. The requirement for tilt switch wiring to have 3,000 Volt insulation is to comply with National Electrical Code Article 300.3 conductors, Part (C) (1) which states "*Conductors of ac and dc circuits rated 1000 volts, nominal, or less, shall be permitted to occupy the same equipment wiring enclosure, cable, or raceway. All conductors shall have an insulation rating equal to at least the maximum circuit voltage applied to any conductor within the enclosure, cable, or raceway.*" The series circuit power cables and tilt switch control cables will occupy the same L-867 transformer can. The maximum rated output voltage for a 5 KW, Type L-828 constant current regulator, Class 1 - 6.6 Amps output current, Style 2 – five (5) brightness steps (2.8, 3.4, 4.1, 5.2, and 6.6-Amps), is calculated to be approximately 758 Volts.

125615-2.5 CONDUIT AND DUCTS. Conduit and ducts for the PAPI systems shall conform to Item 110, per manufacturer's recommendations, as detailed on the Plans, and as specified herein. Conduit for power and control cables between the PAPI lighting units shall be 2-inch Galvanized Rigid Steel Conduit, or larger where required by NEC and/or manufacturer's recommendations for the respective cables. GRSC shall be heavy wall, hot-dipped, galvanized steel pipe bearing the UL label and conforming to UL-6 and ANSI Specification C80.1. Couplings, connectors, and fittings for rigid steel conduit shall be threaded galvanized steel or galvanized malleable iron specifically designed and manufactured for the purpose. Fittings shall conform to ANSI C80.4 and UL-514B. Galvanized rigid steel conduit shall be produced from 100 percent domestic steel.

125615-2.6 SPLICE/TRANSFORMER CANS. Splice/transformer cans shall conform to the requirements of FAA AC 150/5345-42 (respective issue in effect) for Type L-867, Class IA, Size D (16-inch nominal diameter), 24-inch deep. Splice/transformer cans shall have two 2" hubs stacked at 0 degrees and two 2" hubs stacked at 180 degrees. Include an additional 2" hub at 90 degrees to accommodate a grounding electrode conductor from the internal ground lug to the respective ground rod. Splice/transformer cans shall have galvanized steel or aviation yellow powder coat painted steel covers, 3/8 in. thick, or as recommended by the respective

PAPI manufacturer where the splice can is installed at the PAPI installation. **Include internal and external ground lugs on each L-867 splice can.**

125615-2.7 ANTI-SEIZE COMPOUND. The Contractor will apply an oxide-inhibiting, anti-seizing compound to all screws, nuts, breakable coupling, and all places where metal comes into contact with metal. The anti-seize compound will be as manufactured by I.T.T. brand name "Contax", or an approved equal.

125615-2.8 STAINLESS STEEL BOLTS. All base plate-mounting bolts shall be stainless steel.

125615-2.9 GROUND RODS. Ground rods shall be 3/4-inch diameter by 10-foot long UL listed copper clad, with 10-mil minimum copper coating. Steel used to manufacture ground rods shall be 100 percent domestic steel.

125615-2.10 CONCRETE. Concrete associated with the each PAPI foundation piers/pad and/or splice can shall conform to Item 610 Portland Cement Concrete of the Standard Specifications for Construction of Airports.

125615-2.11 LEGEND PLATES. Legend plates shall be required for each PAPI system. Legend plates shall be provided to identify the respective PAPI (Runway designation) and the respective power source. Legend plates shall be weatherproof and abrasion resistant phenolic material. Lettering shall be black letters on a white background, unless otherwise noted.

125615-2.12 SPARE PARTS. Spare parts for airport visual aids are allowable in accordance with the requirements of FAA Order 5100.38D "Airport Improvement Program Handbook" and the guidelines in FAA AC No. 150/5340-26C "Maintenance of Airport Visual Aid Facilities". Provide the following spare parts for the airport visual aid/PAPI systems:

- 200 spare lamps for the PAPI light units.

Spare parts for the airport visual aid/PAPI systems will be considered incidental to the respective PAPI pay items and no additional compensation will be allowed.

CONSTRUCTION METHODS

125615-3.1 INSTALLATION OF PAPI SYSTEMS. Installation of PAPI systems shall conform to FAA AC No. 150/5345-28F titled "PRECISION APPROACH PATH INDICATOR (PAPI) SYSTEMS" and the respective manufacturer's instructions, as detailed on the Plans, and as specified herein. The Contractor shall construct concrete bases for the PAPI system units per manufacturer's instructions and recommendations and/or as shown on the Construction Plans. All bolt placements will be as per manufacturer's recommendations. The structural legs shall have breakable couplings not more than 2 in. from the top of the respective base/foundation. Coordinate conduit installations into the bases as applicable for power, control, and/or grounding cable conduits. The power control unit shall be installed in the location shown on the Plans. The poles/support posts installed to support the unit will be anchored in concrete typical to the PAPI base, and each pole/support post shall have a breakable coupling not more than 2 in. from the top of the concrete base/foundation.

The PAPI units shall be installed and aimed in accordance with manufacturer's specifications and instructions. The aiming angles shall comply with those shown on the Plans.

The Contractor will install all the required electrical equipment in the electrical vault to place the proposed PAPI units into operation. The furnishing and installing of this electrical equipment will be paid for under Item 109200 Install Electrical Equipment per lump sum.

125615-3.2 ELECTRICAL. The Contractor shall furnish and install all electrical materials necessary for complete and operational installation of the PAPI systems as shown on the plans and detailed herein. The complete installation and wiring shall be done in a neat, workmanlike manner. All electrical work shall comply with the requirements of the NFPA 70 - National Electrical Code (NEC) most current issue in force. Electrical equipment shall be installed in conformance with the respective manufacturer's directions and recommendations for the respective application. Any installations which void the UL listing, Intertek Testing Services verification/ETL listing, (or other third party listing), and/or the manufacturer's warranty of a device will not be permitted.

- A. Contractor shall keep a copy of the latest NEC in force on site at all times during construction for use as a reference.
- B. Contractor shall keep a copy of the Plans, Special Provision Specifications including any addenda, and copies of any change orders on site at all times during construction.
- C. Contractor shall coordinate work and any power outages with the Airport Manager, the respective Airport personnel, and the Resident Engineer/Resident Technician. Any shutdown of existing systems shall be scheduled with and approved by the Airport Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout).
- D. Contractor shall comply with the applicable requirements of NFPA 70E – Standard for Electrical Safety in the Workplace.
- E. All electrical equipment installed by the Contractor shall be properly labeled, and all cables must be tagged.
- F. All changes to the airfield lighting system control wiring will be documented by the Contractor and provided to the Resident Engineer/Resident Technician.
- G. Locate Existing Underground Utilities and Cables. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain, from the respective utility companies, detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the

event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract. All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

- H. Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION."
- I. Secure, identify, and place any temporary exposed wiring in conduit to prevent electrocution and fire ignition sources."

125615-3.3 CABLE INSTALLATION FOR PAPI'S. Installation of cables shall conform to Item 108, the applicable sections of FAA AC 150/5345-28F, per the respective equipment manufacturer's recommendations, and as detailed on the Plans. Series circuit power cable between the PAPI lighting units shall be installed in 2-inch (minimum) galvanized rigid steel conduit, or larger where required by NEC and/or manufacturer's recommendations for the respective cables. Tilt switch control cables between the PAPI lighting units shall be installed in separate 2-inch galvanized rigid steel conduit, to maintain separation from the series circuit power wiring.

125615-3.4 CONDUIT INSTALLATION FOR PAPI'S. Installation of conduit shall conform to Item 110, the respective PAPI manufacturer's installation instructions and/or recommendations, as detailed on the Plans and as specified herein. Coordinate conduit installations into the PAPI foundations and/or L-867 splice cans.

125615-3.5 GROUNDING FOR PAPI'S. Grounding for PAPI's shall conform to the respective PAPI manufacturer's installation instructions, as detailed on the Plans, and as specified herein. Furnish and install a 3/4-inch diameter by 10-foot long copper clad ground rod at each PAPI lighting unit. Bond each PAPI unit and the respective L-867 transformer can to the respective ground rod with a #6 AWG stranded copper grounding electrode conductor. Top of ground rods shall be buried approximately 24 inches below grade. All connections to ground rods shall be made with exothermic, weld-type connectors, Cadweld by Erico Products, Inc., Solon, Ohio, (Phone: 800-248-9353), Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone: 918-663-1440), or Ultraweld by Harger Lightning Protection Grounding Equipment, Grayslake, Illinois (Phone: 800-842-7437), or approved equal. Connections to L-867 splice cans shall be with UL listed grounding connectors suitable for use in direct burial or concrete encasement applications. Connections to PAPI unit frame shall be as recommended by the manufacturer or with a UL listed grounding connector. All ground rods associated with the complete PAPI installation shall be bonded to together with a #6 AWG solid copper counterpoise conductor. This counterpoise conductor shall be installed in the same trench located 10 inches above the power and control conductors, between each respective PAPI unit.

125615-3.6 GROUNDING REQUIREMENTS. Grounding shall conform to the following as applicable: The Contractor shall furnish and install all grounding shown on the Plans and/or as may be necessary or required to make a complete grounding system, as required by the latest NFPA 70 – National Electrical Code in force. The reliability of the grounding system is dependent on careful, proper installation, and choice of materials. Improper preparation of surfaces to be joined to make an electrical path, loose joints, or corrosion can introduce impedance that will seriously impair the ability of the ground path to protect personnel and equipment and to absorb transients that can cause noise in communications circuits. The following functions are particularly important to ensure a reliable ground system:

- A. All products associated with the grounding system shall be UL-listed and labeled.
- B. All bolted or mechanical connections shall be coated with a corrosion-preventative compound before joining, Sanchem Inc. "NO-OX-ID "A-Special" compound, Burndy Penetrox E, or equal.
- C. Metallic surfaces to be joined shall be prepared by the removal of all non-conductive material, per 2014 NEC Article 250-12. All copper bus bars must be cleaned prior to making connections to remove surface oxidation.
- D. Metallic raceway fittings shall be made up tight to provide a permanent low impedance path for all circuits. Metal conduit terminations in enclosures shall be bonded to the enclosure with UL-listed fittings suitable for grounding. Provide grounding bushings with bonding jumpers for all metal conduits entering service equipment (meter base, CT cabinet, main service breaker enclosure, etc.), generator breaker enclosures, and automatic transfer switch enclosures. Provide grounding bushings with bonding jumpers for all metal conduits entering an enclosure through concentric or eccentric knockouts that are punched or otherwise formed so as to impair the electrical connection to ground. Standard locknuts or bushings shall not be the sole means for bonding where a conduit enters an enclosure through a concentric or eccentric knockout.
- E. Furnish and install ground rods at all locations where shown on the Plans or specified herein. Ground rods shall be spaced, as detailed on the Plans, and in no case spaced less than one rod length apart. All connections to ground rods and/or buried grounding electrode conductors shall be made with exothermic, weld-type connectors, Cadweld by Erico Products, Inc., Solon, Ohio, (Phone: 1-800-248-9353), Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone: 918-663-1440), or approved equal. Exothermic-weld connections shall be installed in conformance with the respective manufacturer's directions using molds, as required for each respective application. Bolted connections will not be permitted at ground rods or at buried grounding electrode conductors.
- F. All connections, located above grade, between the different types of grounding conductors shall be made using UL-listed, double-compression, crimp-type connectors or UL-listed, bolted ground connectors. For ground connections to enclosures, cases, and frames of electrical equipment not supplied with ground lugs, the Contractor shall drill required holes for mounting a bolted, ground connector. All bolted, ground connectors shall be Burndy, Thomas and Betts, or equal. Tighten connections to comply with tightening torques in UL Standard 486A to assure permanent and effective grounding.
- G. All metal equipment enclosures, conduits, cabinets, boxes, receptacles, etc. shall be bonded to the respective grounding system.

- H. Each new feeder circuit and/or branch circuit shall include an equipment ground wire. Metal raceway or conduit shall not meet this requirement. The equipment ground wire from equipment shall not be smaller than allowed by 2014 NEC Table 250-122 "Minimum Size Conductors or Grounding Raceway and Equipment." When conductors are adjusted in size to compensate for voltage drop, equipment-grounding conductors shall be adjusted proportionately according to circular mil. area. All equipment ground wires shall be copper, either bare or insulated, green in color. Where the equipment grounding conductors are insulated, they shall be identified by the color green, and shall be the same insulation type as the phase conductors.
- I. Install grounding electrode conductors and/or individual ground conductors in Schedule 40 or Schedule 80 PVC conduit. Coordinate the installation of PVC conduit sleeves into the PAPI foundations to accommodate grounding electrode conductor installations from the respective PAPI unit to the respective ground rod.

125615-3.7 PAPI OPERATION. Control of the PAPI units shall be with the L-854 radio receiver and constant current regulator in the vault. Based on the requirements of FAA AC 150/5340-30H *Design and Installation Details for Airport Visual Aids*, FAA AC 150/5345-28G *Precision Approach Path Indicator (PAPI) Systems*, FAA Cert Alert 02-08 (12/12/2002), and review with the FAA an FAA Type L-880 (or L-881), Style B – Current powered (series lighting circuit) system PAPI powered from a 5-step constant current regulator should operate as follows:

PAPI Radio Control Day Mode Illumination Intensity

Status during idle periods – On at 5% minimum brightness; Step B3 on a 5 step regulator
3 clicks of Radio – On at 100% Brightness; Step B5 on a 5 step regulator
5 clicks of Radio – Remain on at 100% Brightness; Step B5 on a 5 step regulator
7 clicks of Radio – Remain on at 100% Brightness; Step B5 on a 5 step regulator

PAPI Radio Control Night Mode Illumination Intensity

Status during idle periods – On at 5% minimum brightness; Step B3 on a 5 step regulator
3 clicks of Radio – 5% Brightness; Step B3 on a 5 step regulator
5 clicks of Radio – 20% to 25% Brightness; Step B4 on a 5 step regulator
7 clicks of Radio – 100% Brightness; Step B5 on a 5 step regulator

125615-3.8 RESTORATION. All turf areas disturbed by the installation of the PAPI system and associated work shall be restored, graded, and seeded to establish a stand of grass to the satisfaction of the Engineer and will be considered as incidental to the installation of the PAPI.

125615-3.9 INSTRUCTION OF AIRPORT STAFF. Contractor shall provide instruction to airport staff in regard to the operation and maintenance of the PAPI system. Contractor shall demonstrate operating procedures, lamp changing procedures, and items requiring maintenance. Contractor shall furnish operation and maintenance manuals for PAPI and associated equipment.

125615-3.10 GROUND CHECK. Prior to final acceptance and activation, each completed PAPI system will be ground checked by the Resident Engineer/Resident Technician and/or Illinois Division of Aeronautics, and it shall be the Contractor's responsibility to have a representative present to make any necessary adjustments and/or corrections of the respective PAPI system installation. Ground check will be scheduled after the PAPI is installed and ready for check out. The ground check often includes confirmation and measurement of aiming angle of the PAPI,

testing the PAPI, measurement of input voltage, measurement of input current, testing the photocell, confirmation of proper grounding, operational tests, and other tests. The Contractor shall be responsible to provide PAPI systems that pass the ground check. A copy of the PAPI Ground Check List is included in the Appendix.

125615-3.11 FLIGHT CHECK. Prior to final acceptance and activation, each completed PAPI system will be flight checked by Federal Aviation Administration and/or Illinois Division of Aeronautics, and it shall be the Contractor's responsibility to have a representative present to make any necessary adjustments in the aiming of the PAPI units. The flight check will be scheduled after the PAPI has passed the ground check. The Contractor shall be responsible to provide a PAPI system that passes the respective flight check by Federal Aviation Administration and/or Illinois Division of Aeronautics.

METHOD OF MEASUREMENT

125615-4.1 The PAPI systems to be furnished and installed shall be measured for payment as a unit price per each and shall include a Type L-880 system consisting of four light units, all concrete and materials as required for foundations, all cable and conduit between and/or at the PAPI lighting units, grounding, splice cans, transformers, equipment, excavating, labor, tools, aiming and calibration equipment, testing, and incidentals necessary to furnish a complete and operational PAPI system as approved by the Resident Engineer/Resident Technician.

BASIS OF PAYMENT

125615-5.1 Payment shall be made at the contract unit price per each. This price and payment shall be full compensation for furnishing and installing all materials, for all excavating, labor, tools, equipment, and incidentals necessary to complete this item of work. Cable in unit duct from the respective power source to the respective PAPI installation shall be paid for under item 108. Cable and conduit between the PAPI light units will be considered incidental to the respective PAPI pay item and no additional compensation will be allowed.

Payment will be made under:

Item AR125615 PAPI (L-880 System) - per each

END OF ITEM AR125615

**ITEM AR125910
REMOVE PLASI**

DESCRIPTION

125910-1.1. This item of work shall consist of the removal of the existing PLASI (Pulse Light Approach Slope Indicator) units in accordance with the details in the Construction Plans and in accordance with these Special Provisions.

125910-1.2 REFERENCES.

- A. FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
- B. NFPA 70E – Standard for Electrical Safety in the Workplace
- C. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures

CONSTRUCTION

125910-2.1 REMOVAL OF PLASI.

- A. Contractor shall examine the site to determine the extent of the work.
- B. Contractor shall coordinate work and any power outages with the Airport Manager, the respective Airport personnel, and the Resident Engineer/Resident Technician. Any shutdown of existing systems shall be scheduled with and approved by the Airport Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout).
- C. Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- D. Contractor shall comply with the applicable requirements of NFPA 70E – Standard for Electrical Safety in the Workplace.
- E. A PLASI unit shall consist of the Downwind Light Boxes, Upwind Light Boxes, Power and Control Unit, associated step-up transformers, step-down transformers and/or boost transformers, circuit breakers, and associated concrete bases/foundations.
- F. Power for each respective PLASI system shall be disconnected at the respective power source prior to removing the respective PLASI system. **Power for the existing PLASI systems located on Runway 18-36 are understood to be powered from the Airport**

Electrical Vault. Contractor shall field verify to confirm the respective power source for each PLASI system.

- G. The Contractor shall remove the PLASI units when the runway is closed. The Contractor shall remove and dispose of the PLASI units off the Airport site in a legal manner. The Contractor shall coordinate with and notify the Airport Manager and the Resident Engineer/Resident Technician and provide a schedule for PLASI removals and the new PAPI installations. The Contractor shall remove the existing PLASI bases and dispose of them off the airport site in a legal manner. The existing electrical cables from the vault shall be disconnected and abandoned in place or removed to accommodate new construction. The holes left from the removal of the concrete bases will be filled with earth material. The earth material will be compacted to prevent any future settlement. The earth material will be obtained from off the Airport site. The disturbed area will be restored, graded, and seeded to the satisfaction of the Engineer, and will be considered as an incidental item to the removal of the PLASI units.
- H. Existing airfield lighting cables associated with airfield lighting to be removed shall be abandoned in place unless it conflicts with new work and then it shall be removed at no additional cost to the Contract. If the Contractor elects to salvage the cable within the circuit to be removed, shown in the Construction Plans as cable to be abandoned, any cost associated with removal of the cable shall be considered incidental to the Contract and no additional compensation will be allowed.
- I. All turf areas disturbed by the removal of PLASI systems and associated work shall be restored, graded, and seeded to establish a stand of grass to the satisfaction of the Engineer. All areas disturbed by work shall be restored to its original condition. The hole left from the removal of each base/foundation shall be filled with earth material. The earth material shall be compacted to prevent any future settlement. The earth material shall be obtained from off the Airport site. The restoration shall include any necessary topsoiling, fertilizing, liming, seeding, or mulching, as shown on the plans. All such work shall be performed in accordance with Item 901 "Seeding" and 908 "Mulching". The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. Restoration shall be considered incidental to the pay item of which it is a component part.

BASIS OF PAYMENT

125910-3.1. This work will be paid for at the contract unit bid price per each for PLASI Removal. Said price and payment shall constitute full compensation for removing the existing PLASI units; for all excavating and backfilling, for furnishing all earth material, materials, labor, tools, equipment, and incidentals necessary to complete this item of work.

Payment will be made under:

Item AR125910 Remove PLASI - per each

END OF ITEM AR125910

APPENDIX A

Constant Current Regulator and
Cable Testing Forms

Prior to beginning airfield lighting modifications and/or cable installation all existing series circuit cables shall be Megger tested and recorded at the vault. All existing series circuit cable loops shall have the resistance tested and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded.

___ Megger test and record Runway 18-36 series circuit cable loop at the vault.

___ Runway 18-36 series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway B series circuit cable loop at the vault.

___ Taxiway B series circuit cable loop shall have the resistance tested and recorded at the vault.

Note: Output voltage measurements are not required for constant current regulators that are not equipped with output voltage meters.

__ Test Runway 18-36 CCR by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	
B30	Phase A:	
	Phase B:	
B100	Phase A:	
	Phase B:	

__ Test Runway 18-36 CCR by L-854 Radio Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	
B30	Phase A:	
	Phase B:	
B100	Phase A:	
	Phase B:	

__ Test Taxiway B CCR by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	
B30	Phase A:	
	Phase B:	
B100	Phase A:	
	Phase B:	

__ Test Taxiway B CCR by L-854 Radio Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	
B30	Phase A:	
	Phase B:	
B100	Phase A:	
	Phase B:	

After airfield lighting modifications, additions, and/or upgrades have been completed, series circuit cables shall be Megger tested and recorded at the vault. All series circuit cable loops shall have the resistance tested and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded.

___ Megger test and record Runway 18-36 series circuit cable loop at the vault.

___ Runway 18-36 series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway B series circuit cable loop at the vault.

___ Taxiway B series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Runway 18 PAPI series circuit cable loop at the vault.

___ Runway 18 PAPI series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Runway 36 PAPI series circuit cable loop at the vault.

___ Runway 36 PAPI series circuit cable loop shall have the resistance tested and recorded at the vault.

Note: Output voltage measurements are not required for constant current regulators that are not equipped with output voltage meters.

__ Test Runway 18-36 CCR by Manual Control and record input current, output amperage and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

__ Test Runway 18-36 CCR by L-854 Radio Control (**Photocell Activate Radio Mode**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Test Runway 18-36 CCR by L-854 Radio Control (**Radio ON 24 Hours per Day Mode**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Test Runway 18-36 CCR by Photocell and record input current, output amperage, and output voltage at respective preset step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		

__ Test Backup CCR for Runway 18-36 C by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	
B30	Phase A:	
	Phase B:	
B100	Phase A:	
	Phase B:	

__ Test Backup CCR for Runway 18-36 by L-854 Radio Control (**Photocell Activate Radio Mode**) and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	
B30	Phase A:	
	Phase B:	
B100	Phase A:	
	Phase B:	

__ Test Backup CCR for Runway 18-36 C by L-854 Radio Control (**Radio ON 24 Hours per Day Mode**) and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	
B30	Phase A:	
	Phase B:	
B100	Phase A:	
	Phase B:	

__ Test Backup CCR for Runway 18-36 by Photocell and record input current and output amperage at respective preset step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B10	Phase A:	
	Phase B:	

Note: Output voltage measurements are not required for constant current regulators that are not equipped with output voltage meters.

__ Test Taxiway B CCR by Manual Control and record input current and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

__ Test Taxiway B CCR by L-854 Radio Control (**Photocell Activate Radio Mode**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Test Taxiway B CCR by L-854 Radio Control (**Radio ON 24 Hours per Day Mode**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

__ Test PAPI CCR for Runway 18-36 with Runway 18 PAPI Load (**Runway 36 PAPI not in circuit**) by Manual Control and record input current, output amperage and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B1	Phase A:		
	Phase B:		
B2	Phase A:		
	Phase B:		
B3	Phase A:		
	Phase B:		
B4	Phase A:		
	Phase B:		
B5	Phase A:		
	Phase B:		

___ Test PAPI CCR for Runway 18-36 with Runway 36 PAPI Load (**Runway 18 PAPI not in circuit**) by Manual Control and record input current, output amperage and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B1	Phase A:		
	Phase B:		
B2	Phase A:		
	Phase B:		
B3	Phase A:		
	Phase B:		
B4	Phase A:		
	Phase B:		
B5	Phase A:		
	Phase B:		

___ Test PAPI CCR for Runway 18-36 with both PAPI's on circuit by Manual Control and record input current, output amperage and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B1	Phase A:		
	Phase B:		
B2	Phase A:		
	Phase B:		
B3	Phase A:		
	Phase B:		
B4	Phase A:		
	Phase B:		
B5	Phase A:		
	Phase B:		

__ Test PAPI CCR for Runway 18-36 with both PAPI's on circuit by L-854 Radio Control (**Day Time Mode; Photocell off**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B3 (Preset Step)	Phase A:		
	Phase B:		
B5 (3 clicks)	Phase A:		
	Phase B:		
B5 (5 clicks)	Phase A:		
	Phase B:		
B5 (7 clicks)	Phase A:		
	Phase B:		

__ Test PAPI CCR for Runway 18-36 with both PAPI's on circuit by L-854 Radio Control (**Night Time Mode; Photocell on**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B3 (Preset Step)	Phase A:		
	Phase B:		
B3 (3 clicks)	Phase A:		
	Phase B:		
B4 (5 clicks)	Phase A:		
	Phase B:		
B5 (7 clicks)	Phase A:		
	Phase B:		

APPENDIX B

PAPI GROUND CHECK LIST

Airport Identifier:	
Airport Name:	
Location:	
Illinois Project No.:	
AIP Project No.:	
Hanson Project No.:	
Date:	
Site Conditions:	

- a. Inspect PAPI to determine that it is installed correctly, at the proper height, at the correct location, level, and properly oriented.
- b. Check all fixture securing screws or bolts to ensure that they have been tightened per manufacturer recommendations. Use an anti-seize compound on bolts made of stainless steel.
- c. Check PAPI to determine that the lenses are clean and unscratched and the channels in front of the lenses are clean.
- d. Test PAPI feeder circuits for continuity and insulation resistance to ground. Observe and record megger test for PAPI feeder circuit conductors.
- e. Check fuses and circuit breakers to determine if they are of the proper rating.
- f. Check PAPI to determine that it is properly oriented with respect to the runway longitudinal sides and the threshold. Check PAPI for proper location.
- g. Check identification number or legend plate for PAPI unit to determine that the respective identification at the installation is as assigned in the Plans.
- h. Check equipment covered by FAA specifications to determine if the manufacturers have supplied certified equipment. Also check the equipment for general conformance with requirements of the Plans, Specifications, and Special Provisions.

- i. Inspect all cables, wiring, and splices to obtain assurance that the installation is per Illinois Standard Specifications for Construction of Airports, the Special Provision Specifications, the Plans, the National Electrical Code, and local codes. Inspect and test insulation resistance of underground cables before backfilling.

- j. Check all ducts and duct markers to determine that the installation is per Illinois Standard Specifications for Construction of Airports, the Special Provision Specifications, and the Plans. Inspect underground ducts before backfill is made.

- k. Check the input voltage at the power and control circuits to determine that the voltage is within limits required for proper equipment operation. Note: for a Style B PAPI check the input voltage to the constant current regulator powering the PAPI systems. Select the proper voltage tap on equipment where taps are provided. Circuitry should also be checked per the manufacturer's requirements.

- l. Check base plates for damage during installation and refinish according to manufacturer's instructions and as acceptable to the Engineer.

- m. Check the current or voltage at the lamps to determine if the regulator current or supply voltage is within specified tolerance. If a current or voltage exceeds rated values, the lamp life will be reduced.

- n. Record nameplate data for PAPI.

Manufacturer:	
Model:	
Part No.:	
Serial No.:	
Weight:	
Power Requirement:	
Type:	

- o. Test PAPI by respective control system and confirm proper operation.
- p. Check the size and type of feeder conductors from the vault or power source to the PAPI.
- q. Make sure each PAPI unit has good ground. Test and record ground resistance of ground rod installation at each PAPI Unit.
- r. Observe and record the aiming angle of each PAPI Light Housing Unit.

PAPI LIGHT HOUSING UNIT	MEASURED AIMING ANGLE
PAPI Light Housing Unit #1 (Closest to the Runway Pavement)	
PAPI Light Housing Unit #2	
PAPI Light Housing Unit #3	
PAPI Light Housing Unit #4 (Furthest to the Runway Pavement)	

- s. Observe operation of the PAPI Power and Control Unit photocell and confirm proper operation of day/night brightness levels.
- t. Confirm Operation and Maintenance Manuals are provided for each PAPI unit.

- u. Test PAPI CCR for respective PAPI by Manual Control and record input current, output amperage and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B1	Phase A:		
	Phase B:		
B2	Phase A:		
	Phase B:		
B3	Phase A:		
	Phase B:		
B4	Phase A:		
	Phase B:		
B5	Phase A:		
	Phase B:		

- v. Test PAPI CCR for respective PAPI by L-854 Radio Control (**Day Time Mode; Photocell off**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B3 (Preset Step)	Phase A:		
	Phase B:		
B5 (3 clicks)	Phase A:		
	Phase B:		
B5 (5 clicks)	Phase A:		
	Phase B:		
B5 (7 clicks)	Phase A:		
	Phase B:		

- w. Test PAPI CCR for Runway 18-36 with both PAPI's on circuit by L-854 Radio Control (**Night Time Mode; Photocell on**) and record input current, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B3 (Preset Step)	Phase A:		
	Phase B:		
B3 (3 clicks)	Phase A:		
	Phase B:		
B4 (5 clicks)	Phase A:		
	Phase B:		
B5 (7 clicks)	Phase A:		
	Phase B:		

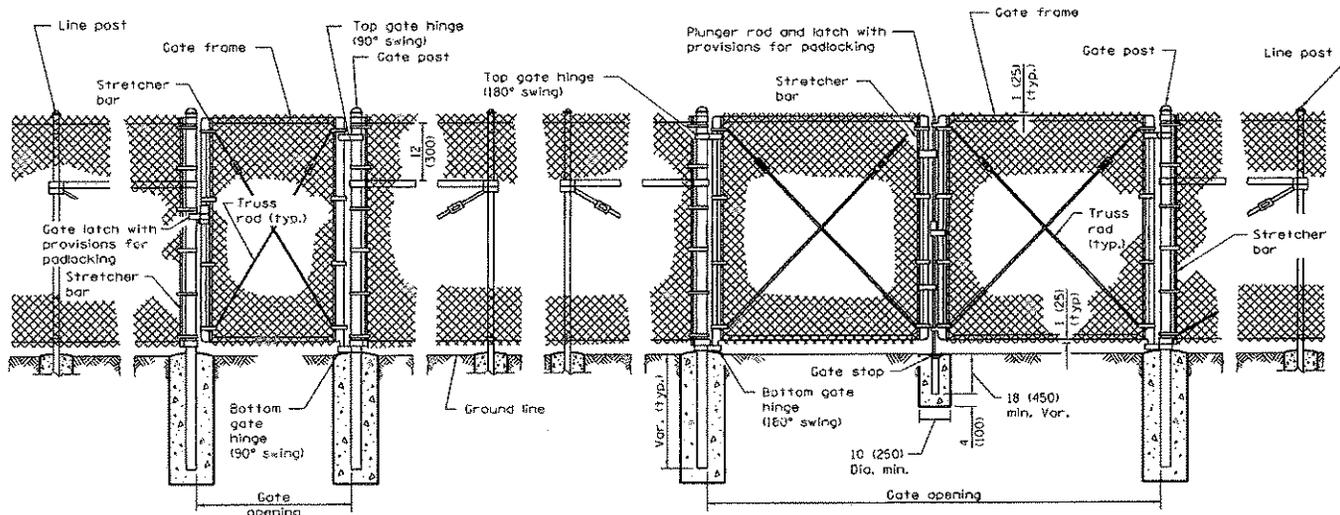
x. Ground Check test results submitted by:

Name:	
Company:	
Date:	

APPENDIX C

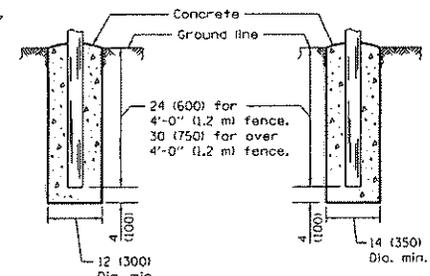
IDOT

Chain Link Fence Standard Details



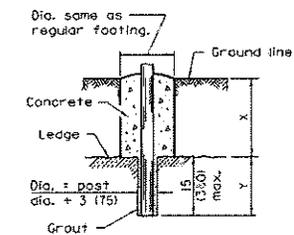
PEDESTRIAN GATE ARRANGEMENT

VEHICLE GATE ARRANGEMENT

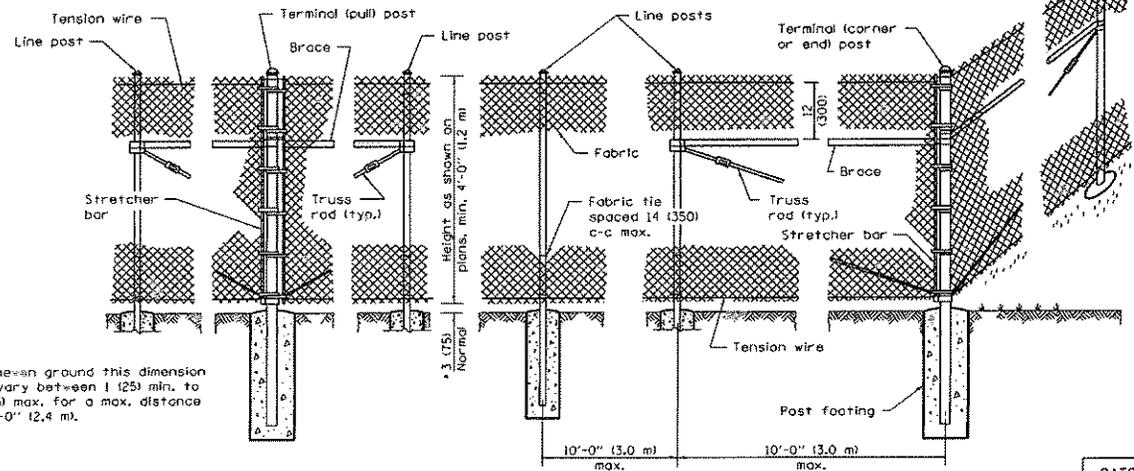


FOOTING FOR LINE POST

FOOTING FOR GATE & TERMINAL POST



FOOTING FOR POST IN ROCK LEDGE



• 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).

• 1 (25) Normal

PULL POST ARRANGEMENT

LINE POST ARRANGEMENT

CORNER OR END POST ARRANGEMENT

GENERAL NOTES

Pull posts 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.

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

Illinois Department of Transportation

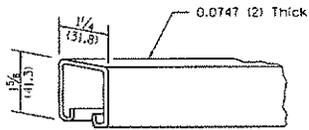
PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

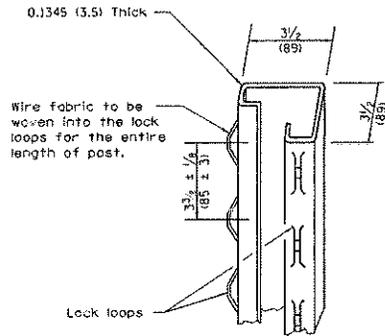
APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

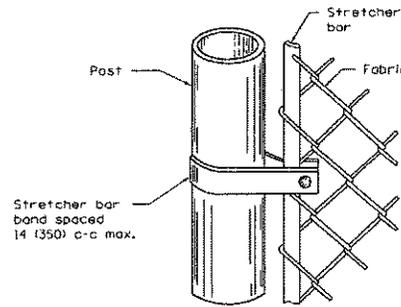
15-11 (REVISED)



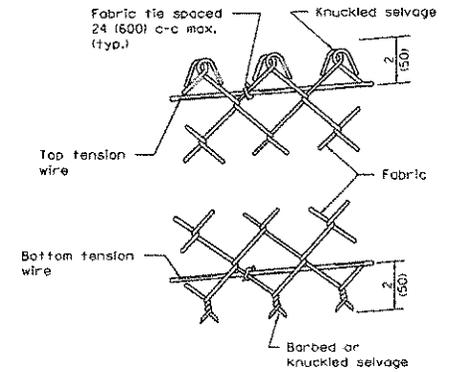
ROLL FORMED SECTION OF BRACE



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)
C	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.	3.55 (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)
Roll Formed 3/2x3/2 (89.0x89.0)	See detail
Sq. Tubing 2 1/2x2 1/2 (63.5x63.5)	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)
Roll Formed 1 1/2x1 1/4 (41.3x31.8)	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 3/2 x 3/2 (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

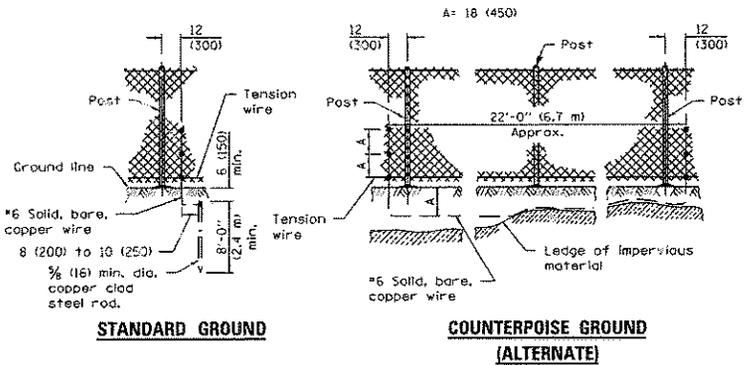
ENGINEER OF DESIGN AND ENVIRONMENT

16-11-02/ISS

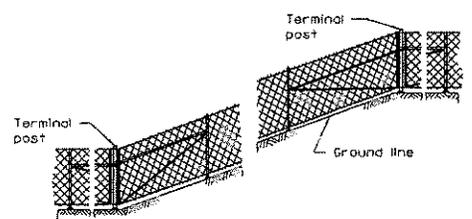
CHAIN LINK FENCE

(Sheet 2 of 3)

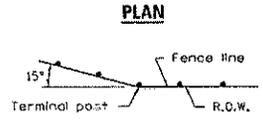
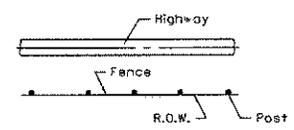
STANDARD 664001-02



PROTECTIVE ELECTRICAL GROUNDS



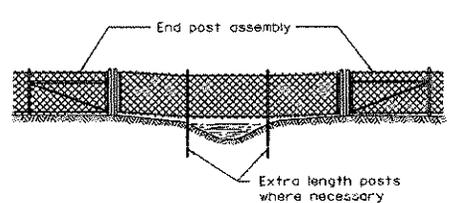
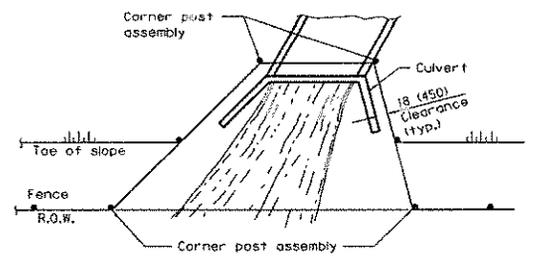
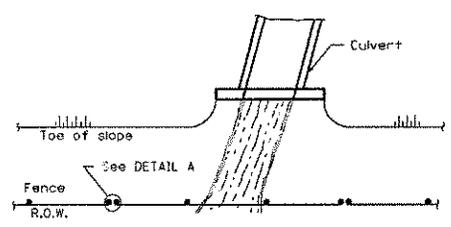
INSTALLATION ON SLOPES



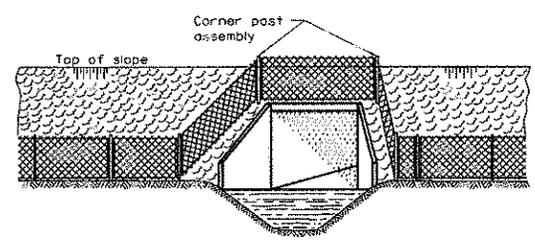
When fence line has a change in direction of 15° or more, a terminal post shall be placed as shown above.

Where angle is less than 15° and existing conditions require a terminal post, they shall be placed as directed by the Engineer.

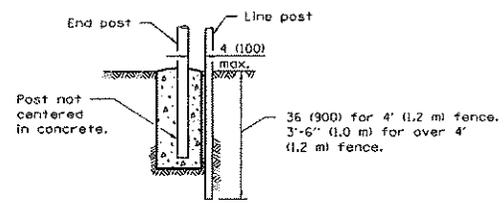
INSTALLATION AT CORNERS



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.



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

CHAIN LINK FENCE

(Sheet 3 of 3)

STANDARD 664001-02