RETURN WITH BID

LETTING DATE June 15, 2007

ITEM NUMBER **6A**

Proposal Submitted By

Name

Address

City/State

Zip Code Telephone Number

FEIN Number FAX Number

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

NOTICE TO PROSPECTIVE BIDDERS

This proposal can be used for bidding purposes by only those companies that request and receive written AUTHORIZATION TO BID from IDOT's Central Bureau of Construction.
(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

PROPOSAL COVER SHEET

Illinois Department of Transportation
DIVISION OF AERONAUTICS

AIRPORT **Abraham Lincoln Capital**

MUNICIPAL DESIGNATION Springfield

COUNTY DESIGNATION Sangamon

ILLINOIS PROJECT NO. SPI-3488

FEDERAL PROJECT NO. 3-17-0096-42

Is the Option for Bituminous Materials Cost Adjustments Selected?

Please See Pages 69 and 70 and Mark the Appropriate Box Below:

☐ Yes ☐ No

PLEASE MARK THE APPROPRIATE BOX BELOW:

☐ A Bid Bond is included.

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

INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond required for Prime Contractors to submit a bid after written **Authorization to Bid** has been issued by IDOT's Central Bureau of Construction.

HOW MANY PROPOSALS SHOULD PROSPECTIVE BIDDERS REQUEST?: Prospective bidders should, prior to submitting their initial request for plans and proposals, determine their needs and request the total number of plans and proposals needed for each item requested. There will be a nonrefundable charge of $15 for each set of plans and specifications issued.

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.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Proposal Forms and Plans" he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Proposal Denial and/or Authorization Form**, they should contact the Central Bureau of Construction in advance of the letting date.

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

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

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

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

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

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

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

Illinois Department of Transportation

PROPOSAL

1. Proposal of _____

   _____

   for the improvement officially known as:

   (a) Abraham Lincoln Capital Airport

   (b) The proposed improvement shown in detail on the plans issued by the Department schedule and detail sheets included herein, includes, in general, the following described work:

   Construct Runway 13/31 Improvements; Extend Taxiway B

TO THE DEPARTMENT OF TRANSPORTATION

2. The plans for the proposed work are those issued by the Department of Transportation to cover the work described above.

The specifications are those prepared by the Department of Transportation, Division of Aeronautics and designated as "Standard Specifications for Construction of Airports," adopted January, 1985, the "Supplemental Specifications and Recurring Special Provisions," adopted July 1, 2004 and the "Special Provisions" thereto, adopted and in effect on the date of invitation for bids.

3. **COMPLETION TIME/LIQUIDATED DAMAGES**. It being understood and agreed that the completion within the time limit is an essential part of the contract, the bidder agrees to complete the work within 81 calendar days, unless additional time is granted by the Engineer in accordance with the provisions of the specifications. In case of failure to complete the work on or before the time named herein, or within such extra time as may have been allowed by extensions, the bidder agrees that the Department of Transportation shall withhold from such sum as may be due him/her under the terms of this contract, the costs, as set forth below, which costs shall be considered and treated not as a penalty but as damages due to the State from the bidder by reason of the failure of the bidder to complete the work within the time specified in the contract. The following Schedule of Deductions supersedes the table given in Section 60-09 of the Division's Standard Specifications for Construction of Airports.

Schedule of Deductions for Each
Day of Overrun in Contract Time

Original Contract Amount		Daily Charge
From More Than	To and Including	Calendar Day
$ 0	$ 25,000	$ 300
25,000	100,000	375
100,000	500,000	550
500,000	1,000,000	725
1,000,000	2,000,000	900
2,000,000	3,000,000	1,100
3,000,000	5,000,000	1,300
5,000,000	7,500,000	1,450
7,500,000	10,000,000	1,650

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

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

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

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

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

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

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

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

RETURN WITH BID

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.

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

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

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

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

   The following provisions shall govern combination bidding:

   (a) A combination bid which is submitted for 2 or more proposals and awarded on that basis shall have the bid prorated against each proposal in proportion to the bid submitted for each proposal.

   (b) Separate contracts shall be executed for each individual proposal included in the combination.

   (c) The contract time for all contracts awarded on a combination bid shall be the sum of all calendar days contained within each contract included in the combination, unless otherwise provided in the contracts.

   (d) In the event the Contractor fails to complete any or all of the contracts on the combination bid within the contract time, including any authorized extension, the liquidated damages shall be determined from the schedule of deductions shown above in paragraph 3 for each day of overrun in contract time, based on the combination bid total, and shall be computed on the combination and prorated against the 2 or more individual contracts based on the dollar value of each contract.

(e) The plans and Special Provisions for each separate contract shall be construed separately for all requirements, except as described in paragraphs (a) through (d) listed above.

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid Dollars	Cents

8. **SCHEDULE OF PRICES.** The undersigned submits herewith his/her schedule of prices covering the work to be performed under this contract; he/she understands that he/she must show in the schedule the unit prices (with no more than two decimal places, i.e. $25.35, not $25.348) for which he/she proposes to perform each item of work, that the extensions must be made by him/her, and that if not so done his/her proposal may be rejected as irregular.

   The undersigned further agrees that the unit prices submitted herewith are for the purpose of obtaining a gross sum, and for use in computing the value of additions and deductions; that if there is a discrepancy between the gross sum bid and that resulting from the summation of the quantities multiplied by their respective unit prices, the latter shall govern.

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - CA003

COUNTY NAME	CODE	DIST	AIRPORT NAME	FED PROJECT	ILL PROJECT
SANGAMON	167	06	ABRAHAM LINCOLN CAPITAL	3-17-0096-42	SP-I -3488

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
AR101510	AIRPORT ROTATING BEACON	EACH	1.000	X			=		
AR107960	RELOCATE WIND CONE	EACH	2.000	X			=		
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	34,050.000	X			=		
AR109210	VAULT MODIFICATIONS	L.S.	1.000	X			=		
AR109342	20 KW REGULATOR, STYLE 2	EACH	2.000	X			=		
AR109620	LIGHTING CONTROL SYSTEM	L.S.	1.000	X			=		
AR110014	4" DIRECTIONAL BORE	L.F.	160.000	X			=		
AR110212	2" STEEL DUCT, DIRECT BURY	L.F.	130.000	X			=		
AR110504	4-WAY CONCRETE ENCASED DUCT	L.F.	290.000	X			=		
AR125415	MITL-BASE MOUNTED	EACH	62.000	X			=		
AR125442	TAXI GUIDANCE SIGN, 2 CHARACTER	EACH	2.000	X			=		
AR125443	TAXI GUIDANCE SIGN, 3 CHARACTER	EACH	1.000	X			=		
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	4.000	X			=		
AR125445	TAXI GUIDANCE SIGN, 5 CHARACTER	EACH	3.000	X			=		
AR125446	TAXI GUIDANCE SIGN, 6 CHARACTER	EACH	2.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
AR125515	HIRL, BASE MOUNTED	EACH	64.000	X			=		
AR125525	HIRL, INPAVEMENT	EACH	6.000	X			=		
AR125550	HI THRESHOLD LIGHT BASE MTD	EACH	24.000	X			=		
AR125560	RUNWAY DISTANCE REMAINING SIGN	EACH	13.000	X			=		
AR125565	SPLICE CAN	EACH	9.000	X			=		
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	57.000	X			=		
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	54.000	X			=		
AR125903	REMOVE INPAVEMENT LIGHT	EACH	5.000	X			=		
AR125904	REMOVE TAXI GUIDANCE SIGN	EACH	7.000	X			=		
AR125905	REMOVE RWY DISTANCE REMAIN SIGN	EACH	6.000	X			=		
AR125906	REMOVE SPLICE CAN	EACH	4.000	X			=		
AR125923	REPLACE INPAVEMENT LIGHT	EACH	6.000	X			=		
AR125967	RELOCATE REILS	PAIR	1.000	X			=		
AR125968	RELOCATE PAPI	EACH	1.000	X			=		
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
AR151450	CLEARING AND GRUBBING	ACRE	2.500	X			=		
AR152455	EMBANKMENT IN PLACE	C.Y.	24,000.000	X			=		
AR152460	TOPSOIL STRIPPING	C.Y.	8,850.000	X			=		
AR155540	BY-PRODUCT LIME	TON	185.000	X			=		
AR155608	SOIL PROCESSING-8"	S.Y.	11,500.000	X			=		
AR156510	SILT FENCE	L.F.	4,270.000	X			=		
AR156520	INLET PROTECTION	EACH	5.000	X			=		
AR156540	RIPRAP	S.Y.	110.000	X			=		
AR201610	BITUMINOUS BASE COURSE	TON	9,715.000	X			=		
AR201630	BITUMINOUS BASE TEST SECTION	EACH	1.000	X			=		
AR209604	CRUSHED AGG. BASE COURSE - 4"	S.Y.	16,160.000	X			=		
AR401610	BITUMINOUS SURFACE COURSE	TON	2,825.000	X			=		
AR401630	BITUMINOUS SURFACE TEST SECTION	EACH	1.000	X			=		
AR401655	BUTT JOINT CONSTRUCTION	S.Y.	210.000	X			=		
AR401665	BITUMINOUS PAVEMENT SAWING	L.F.	675.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
AR602510	BITUMINOUS PRIME COAT	GAL.	6,470.000	X			=		
AR603510	BITUMINOUS TACK COAT	GAL.	875.000	X			=		
AR620510	PAVEMENT MARKING	S.F.	171,870.000	X			=		
AR620900	PAVEMENT MARKING REMOVAL	S.F.	44,200.000	X			=		
AR701524	24" RCP, CLASS IV	L.F.	493.000	X			=		
AR701542	42" RCP, CLASS IV	L.F.	427.000	X			=		
AR701560	60" RCP, CLASS IV	L.F.	311.000	X			=		
AR701900	REMOVE PIPE	L.F.	440.000	X			=		
AR705524	4" PERFORATED UNDERDRAIN W/SOCK	L.F.	3,165.000	X			=		
AR705544	4" NON PERFORATED UNDERDRAIN	L.F.	160.000	X			=		
AR705635	UNDERDRAIN COLLECTION STRUCTURE	EACH	3.000	X			=		
AR705640	UNDERDRAIN CLEANOUT	EACH	7.000	X			=		
AR705900	REMOVE UNDERDRAIN	L.F.	175.000	X			=		
AR705945	ADJUST COLLECTION STRUCTURE	EACH	1.000	X			=		
AR751415	INLET-SPECIAL	EACH	2.000	X			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
AR751550	MANHOLE 5'	EACH	1.000			=		
AR751560	MANHOLE 6'	EACH	2.000			=		
AR751900	REMOVE INLET	EACH	1.000			=		
AR752460	PRECAST REINFORCED CONC. FES 60"	EACH	1.000			=		
AR752900	REMOVE END SECTION	EACH	1.000			=		
AR800250	2-1/C #8 5 KV UG CABLE IN UD	L.F.	1,300.000			=		
AR800287	FOUNDATION REMOVAL	EACH	4.000			=		
AR800288	REIL HOMERUN	L.F.	2,350.000			=		
AR800289	PAPI HOMERUN	L.F.	1,350.000			=		
AR800290	MALSR THRESHOLD BAR CIRCUIT	L.F.	350.000			=		
AR800291	REMOVE L-821 SYSTEM	L.S.	1.000			=		
AR800293	DUCT MARKER-IN PAVEMENT	EACH	62.000			=		
AR800294	REPLACE SIGN FACE	EACH	44.000			=		
AR800295	RUNWAY THRESHOLD BAR	EACH	2.000			=		
AR800296	ADJUST MALSR THRESHOLD BAR	L.S.	1.000			=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
AR800297	REPLACE ISOLATION TRANSFORMER	EACH	6.000	X			=		
AR800298	LIGHT GROUND ROD	EACH	184.000	X			=		
AR800345	SURFACE SENSOR SYSTEM UPGRADE	L.S.	1.000	X			=		
AR800833	PORTABLE CLOSED RUNWAY MARKER	EACH	2.000	X			=		
AR901510	SEEDING	ACRE	19.000	X			=		
AR904510	SODDING	S.Y.	3,585.000	X			=		
AR908510	MULCHING	ACRE	19.000	X			=		
AR908520	EXCELSIOR BLANKET	S.Y.	4,370.000	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

THE PRECEDING SCHEDULE OF PRICES MUST BE

COMPLETED AND RETURNED.

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

I. GENERAL

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

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. 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 termination of the contract and the suspension or debarment of the bidder.

II. ASSURANCES

A. 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. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous assurance, and the surety providing the performance bond shall be responsible for the completion of the contract.

B. Felons

1. The Illinois Procurement Code provides:

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

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-10.

C. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

The current salary of the Governor is $145,877.00. Sixty percent of the salary is $87,526.20.

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

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

E. Inducements

1. The Illinois Procurement Code provides:

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

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

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

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

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

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offers, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the chief procurement officer.

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

H. Confidentiality

1. The Illinois Procurement Code provides:

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

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

I. Insider Information

1. The Illinois Procurement Act provides:

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

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

III. CERTIFICATIONS

A. 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. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous certification, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

(b) Businesses. No business shall be barred from contracting with any unit of State or local government 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, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

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

(d) Certification. Every bid submitted to and contract executed by the State shall contain a certification by the contractor that the contractor is not barred from being awarded a contract or subcontract under this Section. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

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

C. Educational Loan

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

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

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

D. Bid-Rigging/Bid Rotating

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

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

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

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

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

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

E. International Anti-Boycott

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

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

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

F. Drug Free Workplace

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

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

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

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

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

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

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

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

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

G. Debt Delinquency

1. The Illinois Procurement Code provides:

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

The contractor or bidder certifies that it, or any affiliate, is not barred from being awarded a contract under 30 ILCS 500. Section 50-11 prohibits a person from entering into a contract with a State agency 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 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 contractor further acknowledges that the contracting State agency may declare the contract void if this certification is false or if the contractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

H. Sarbanes-Oxley Act of 2002

1. The Illinois Procurement Code provides:

Section 50-60(c).

The contractor 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 for a period of five years prior to the date of the bid or contract. The contractor acknowledges that the contracting agency shall declare the contract void if this certification is false.

I. Section 42 of the Environmental Protection Act

The contractor certifies in accordance with 30 ILCS 500/50-12 that the bidder or contractor is not barred from being awarded a contract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency 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 contractor acknowledges that the contracting agency may declare the contract void if this certification is false.

J. Executive Order Number 1 (2007) Regarding Lobbying on Government Procurements

The bidder hereby warrants and certifies that they have complied and will comply with the requirements set forth in this Order. The requirements of this warrant and certification are a material part of the contract, and the contractor shall require this warrant and certification provision to be included in all approved subcontracts.

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 Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous disclosure, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than $10,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act.

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. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid or incorporated by reference.**

C. Disclosure Form Instructions

Form A: For bidders that have previously submitted the information requested in Form A

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may sign the following certification statement indicating that the information previously submitted by the bidder is, as of the date of signature, current and accurate. The Certification must be signed and dated by a person who is authorized to execute contracts for the bidding company. Before signing this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder signs the Certification, the Bidder should proceed to Form B instructions.

CERTIFICATION STATEMENT

I have determined that the Form A disclosure information previously submitted is current and accurate, and all forms are hereby incorporated by reference in this bid. Any necessary additional forms or amendments to previously submitted forms are attached to this bid.

_____
(Bidding Company)

_____ _____
Name of Authorized Representative (type or print) Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative Date

Form A: For bidders who have NOT previously submitted the information requested in Form A

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 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 the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES _____ NO _____
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than $87,526.20? YES _____ NO_____
3. Does anyone in your organization receive more than $87,526.20 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 $87,526.20? YES _____ NO _____

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

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

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

Form B: **Identifying Other Contracts & Procurement Related Information** Disclosure Form B must be completed for each bid submitted by the bidding entity. It must be signed by an individual who is authorized to execute contracts for the bidding entity. *Note: Signing the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, signed 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 signature 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.

D. Bidders Submitting More Than One Bid

Bidders submitting multiple bids may submit one set of forms consisting of all required Form A disclosures and one Form B for use with all bids. Please indicate in the space provided below the bid item that contains the original disclosure forms and the bid items which incorporate the forms by reference.

- The bid submitted for letting item _____ contains the Form A disclosures or Certification Statement and the Form B disclosures. The following letting items incorporate the said forms by reference:

  _____

  _____

RETURN WITH BID/OFFER

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A
Financial Information & Potential Conflicts of Interest Disclosure

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

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

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 $87,526.20 (60% of the Governor's salary as of 10/1/2000). **(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 _____

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

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

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

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

Yes _____ No _____

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

Yes _____ No _____

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

Yes _____ No _____

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

Yes _____ No _____

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

Yes _____ No _____

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

Yes _____ No _____

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page.

Completed by: _____
Name of Authorized Representative (type or print)

Completed by: _____
Title of Authorized Representative (type or print)

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

NOT APPLICABLE STATEMENT

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.

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative Date

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Other Contracts & Procurement Related Information Disclosure

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of $10,000, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

THE FOLLOWING STATEMENT MUST BE SIGNED

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative Date

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

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

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

RETURN WITH BID

Illinois Department of Transportation

PART I. IDENTIFICATION

Human Rights

Bid Number: _____ Duration of Project: _____

Name of Bidder: _____

PART II. WORKFORCE PROJECTION

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

TABLE A

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

TABLE C

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

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

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Note: See instructions on page 2

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____ Telephone Number _____

_____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

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

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

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

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

RETURN WITH BID

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

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

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

B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:

1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____

2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES _____ NO _____

C. BUY AMERICAN - STEEL AND MANUFACTURED PRODUCTS FOR CONSTRUCTION CONTRACTS (JAN 1991)

(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. The following terms apply:

1. Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs (b)(1) or (2) shall be treated as domestic.

2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.

3. Cost of Components. This means the costs for production of the components, exclusive of final assembly labor costs.

(b) The successful bidder will be required to assure that only domestic steel and manufactured products will be used by the Contractor, subcontractors, materialmen, and suppliers in the performance of this contract, except those-

(1) that the U.S. Department of Transportation 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 of a satisfactory quality;

(2) that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

(3) that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

(End of Clause)

D. BUY AMERICAN CERTIFICATE (JAN 1991)

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel and each manufactured product, is produced in the United States (as defined in the clause Buy American - Steel and Manufactured Products or Buy American - Steel and Manufactured Products For Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain from (IDOT, Division of Aeronautics) lists of articles, materials, and supplies excepted from this provision.

PRODUCT	COUNTRY OF ORIGIN

E. 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 five or more acres total land area.

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

The Airport Owner or its Agent will:

1) prepare, sign and submit the Notice of Intent (NOI)

2) conduct site inspections and complete and file the inspection reports

3) submit Incidence of Non-Compliance (ION) forms

4) submit Notice of Termination (NOT) form

Prior to the issuance of the Notice-to-Proceed, for <u>each</u> 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).

F. NON-APPROPRIATION CLAUSE

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

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

RETURN WITH BID

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway in Springfield, Illinois until 10:00 o'clock a.m., June 15, 2007. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.

2. **DESCRIPTION OF WORK**. The proposed improvement, shown in detail on the plans issued by the Department includes, in general, the following described work:

   Construct Runway 13/31 Improvements; Extend Taxiway B

3. **INSTRUCTIONS TO BIDDERS**. (a) This Notice, the invitation for bids, proposal and award shall, together with all other documents in accordance with Article 10-15 of the Illinois Standard Specifications for Construction of Airports, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

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

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

5. **PRE-BID CONFERENCE.** There will be a pre-bid conference held at N/A at the Abraham Lincoln Capital Airport administration building. For engineering information, contact Randy Vogel of Crawford, Murphy & Tilly, Inc. at (217) 572-1044.

6. **DISADVANTAGED BUSINESS POLICY.** The DBE goal for this contract is 7.0%.

7. **SPECIFICATIONS AND DRAWINGS.** The work shall be done in accordance with the Illinois Standard Specifications for Construction of Airports, the Illinois Division of Aeronautics Supplemental Specifications and Recurring Special Provisions, the Special Provisions dated April 24, 2007 and the Construction Plans dated April 24, 2007 as approved by the Department of Transportation, Division of Aeronautics.

8. INSPECTION OF RECORDS. The Contractor shall maintain an acceptable cost accounting system. The Sponsor, the FAA, and the Comptroller General of the United States shall have access to any books, documents, paper, and records of the Contractor which are directly pertinent to the specific contract for the purposes of making an audit, examination, excerpts, and transcriptions. The Contractor shall maintain all required records for three years after the Sponsor makes final payment and all other pending matters are closed.

9. RIGHTS TO INVENTIONS. All rights to inventions and materials generated under this contract are subject to Illinois law and to regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed. Information regarding these rights is available from the FAA and the Sponsor.

10. TERMINATION OF CONTRACT.

1. The Sponsor may, be written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.

2. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.

3. If the termination is due to failure to fulfill the Contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the Contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.

4. If, after notice of termination for failure to fulfill contract obligations, it is determined that the Contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.

5. The rights and remedies of the sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

11. 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.

12. 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 81 calendar days and is based on anticipated notice-to-proceed date of August 1, 2007.

13. 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.

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

RETURN WITH BID

PROPOSAL SIGNATURE SHEET

The undersigned bidder hereby makes and submits this bid on the subject Proposal, thereby assuring the Department that all requirements of the Invitation for Bids and rules of the Department have been met, that there is no misunderstanding of the requirements of paragraph 4 of this Proposal, and that the contract will be executed in accordance with the rules of the Department if an award is made on this bid.

(IF AN INDIVIDUAL)

Firm Name _____

Signature of Owner _____

Business Address _____

(IF A CO-PARTNERSHIP)

Firm Name _____

By _____

Business Address _____

Name and Address of All Members of the Firm:

_____ _____

_____ _____

(IF A CORPORATION)

Corporate Name _____

Corporate Seal

By _____

President

Attest _____

Corporate Secretary

Business Address _____

Name of Corporate Officers:

_____ _____ _____

President Corporate Secretary Treasurer

NOTARY CERTIFICATION

STATE OF ILLINOIS,

ALL SIGNATURES MUST BE NOTARIZED

COUNTY OF _____

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

_____ AND _____

(Insert names of individual(s) signing on behalf of bidder)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of the bidder, appeared before me this day in person and acknowledged that they signed, sealed, 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 _____ _____(Seal)

Notary Public

Illinois Department of Transportation

Return with Bid

Division of Aeronautics
Proposal Bid Bond
(Effective January 1, 2002)

Item No. **6A**
Letting Date: **June 15, 2007**

Airport: Abraham Lincoln Capital Airport
Ill. Proj. No. SPI-3488
Fed. Proj. No. 3-17-0096-42

KNOW ALL MEN BY THESE PRESENTS. that we, _____, as PRINCIPAL, and _____, as SURETY are held and firmly bound unto the, hereinafter called the SPONSOR, in the penal sum of 5 percent of the total bid price or of the amount specified in Section 6, PROPOSAL GUARANTEE of the Proposal Document, whichever is the lesser sum, well and truly to be paid unto the said SPONSOR, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THIS 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 PRINCIPAL shall within the time and as specified in the Bidding and Contract Documents, submit the DBE Utilization Plan that is acceptable and approved by the AGENT, and if after the award, the PRINCIPAL shall enter into a contract in accordance with the terms of the Bidding and Contract Documents including evidence of insurance coverage's and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for 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 in the Bid Proposal and such larger amount for which the SPONSOR may contract with another party to perform the work covered by said Proposal Document, then, this obligation to be void; otherwise to 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 the SURETY shall pay the penal sum to the SPONSOR within fifteen (15) days of written demand therefor. If the SURETY does not make full payment within such period of time, the AGENT may bring an action to collect the amount owed. The 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 WITNESS WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by

their respective officers this _____ day of _____A.D., 20 ___.

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

Notary Certification for Principal and Surety

State of Illinois)
) ss:
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 uses and purposes therein set forth.

Given under my hand and notary seal this _____day of _____A.D., 20___

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 below, the PRINCIPAL is ensuring the identified electronic bid bond has been executed and the PRINCIPAL and SURETY are firmly bound to 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

Form D.E. (Rev. 12-2001)

Illinois Department of Transportation

PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

Bidders should affix this form to the front of a 10” x 13” envelope and use that 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 323
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

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.

Illinois Department of Transportation

(1) Airport Improvement Program projects. The work in this contract is included in the federal Airport Improvement Program and is being undertaken and accomplished by the Illinois Department of Transportation, Division of Aeronautics and the Municipality, hereinafter called the Co-Sponsors, in accordance with the terms and conditions of a Grant Agreement between the Co-Sponsors and the United States, under the Airport and Airway Improvement Act of 1982 (Public Law 97-248; Title V, Section 501 et seq., September 3, 1982; 96 Stat. 671; codified at 49 U.S.C Section 2201 et seq.) and Part 152 of the Federal Aviation Regulations (14 CFR Part 152), pursuant to which the United States has agreed to pay a certain percentage of the costs of the Project that are determined to be allowable Project costs under the Act. The United States is not a party to this contract and no reference in this contract to FAA or representative thereof, or to any rights granted to the FAA or any representative thereof, or the United States, by the contract, makes the United States a party to this contract.

(2) Consent of Assignment. The Contractor shall obtain the prior written consent of the Co-Sponsors to any proposed assignment of any interest in or part of this contract.

(3) Convict Labor. No convict labor may be employed under this contract.

(4) Veterans Preference. In the employment of labor, except in executive, administrative, and supervisory positions, preference shall be given to veterans of the Vietnam era and disabled veterans as defined in Section 515(c) of the Airport and Airway Improvement Act of 1982. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

(5) Withholding: Sponsor from Contractor. Whether or not payments or advances to the Co-Sponsors are withheld or suspended by the FAA, the Co-Sponsors may withhold or cause to be withheld from the Contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics employed by the Contractor or any subcontractor on the work the full amount of wages required by this contract.

(6) Nonpayment of Wages. If the Contractor or subcontractor fails to pay any laborer or mechanic employed or working on the site of the work any of the wages required by this contract the Co-Sponsors may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment or advance of funds until the violations cease.

(7) FAA Inspection and Review. The Contractor shall allow any authorized representative of the FAA to inspect and review any work or materials used in the performance of this contract.

(8) Subcontracts. The Contractor shall insert in each of his subcontracts the provisions contained in Paragraphs (1), (3), (4), (5), (6), and (7) above and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

(9) Contract Termination. A breach of Paragraph (6), (7), and (8) above may be grounds for termination of the contract.

PROVISIONS REQUIRED BY THE REGULATIONS
OF THE SECRETARY OF LABOR
29 CFR 5.5

(a) Contract Provisions and Related Matters.

(1) Minimum Wages.

Revised 1/92

(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 regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provision of paragraph (a)(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 paragraph 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(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 be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics 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 therefor 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.

(ii)(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. (Approved by the Office of Management and Budget under OMB control number 1215-0140).

(ii)(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. (Approved by the Office of Management and Budget under OMB control number 1215-0140).

(ii)(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(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. (Approved by the Office of Management and Budget under OMB control number 1215-0140).

(2) Withholding. The Federal Aviation Administration shall upon its own action or written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (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 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 work, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office Management and Budget under OMB control numbers 1215-0140 and 1215-0017).

(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 paragraph 5.5(a)(3)(i) of Regulations, 29 CFR Part 5. This information may be submitted in any form desired.

Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB control number 1215-0149).

(ii)(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 maintained under paragraph 5.5(a)(3)(i) of Regulations, 29 CFR Part 5 and that such information is correct and complete;

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

(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.

(ii)(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 (a)(3)(ii)(B) of this section.

(ii)(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 (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) 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 a 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 who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ration 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 contract 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 paragraph (a)(1) through (10) of this contract 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 an subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract determination: debarment. A breach of these contract clauses paragraphs (a)(1) through (10) and the 2nd clause (b)(1) through (5) below 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 referenced 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.

(b) Contract Work Hours and Safety Standards Act. The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), (4) and (5) of this section in full in AIP construction contracts in excess of $2,000. These clauses shall be inserted in addition to the clauses required by paragraph 5.5(a) or paragraph 4.6 of Part 4 of this title. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements: No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen or guards (including apprentices and trainees described in paragraphs 5 and 6 above) shall require or permit any laborer, mechanic, watchman or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman or guard receives compensation at a rate not less than one and one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violations: Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for his/her unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman or guard employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of $10.00 for each calendar day on which such employee was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

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

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

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

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in paragraph 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the Contractor or subcontractor will permit such representatives to interview employees during working hours on the job. (Approved by the Office of Management and Budget under OMB control numbers 1215-0140 and 1215-0017).

FEDERAL REGULATIONS VOL. 40, #74,
WEDNESDAY, APRIL 16, 1975, PAGE 17124,
ADMINISTRATION OF THE CLEAR AIR ACT
& WATER POLLUTION CONTROL ACT
(with respect to Federal Grants)

In connection with the administration of the Clean Air Act and the Water Pollution Control Act with respect to Federal Grants, specific requirements have been imposed of any contract which is not exempt under the provisions of 40 CFR 15.5.

(1) Any facility listed on the EPA List of Violating Facilities pursuant to Paragraph 15.20 of 40 CFR as of the date of the contract award will not be utilized in the performance of any non-exempt contract or subcontract.

(2) The Contractor shall comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 USC 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 USC 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 Air Act and Water Act, respectively, and all regulations and guidelines issued thereunder after the award of the contract.

(3) Prompt notification shall be required prior to contract award to the awarding official by the Contractor who will receive the award of the receipt of any communication from the Director, Office of Federal Activities, U.S. Environmental Protection Agency, indicating that a facility to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

(4) The Contractor shall include or cause to be included the criteria and requirements in paragraphs 1 through 4 in any non-exempt subcontract and will take such action as the Government may direct as a means of enforcing such provisions.

Attachment No. 1

During the performance of the 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 the behalf of the Contractor, state that all qualified applicants will receive consideration 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 worker's 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 24 September 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of 24 September 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 24 September 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 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.

ATTACHMENT NO. 2

EACH PRIME CONTRACTOR SHALL INSERT IN EACH SUBCONTRACT THE CERTIFICATION IN APPENDIX B, AND FURTHER, SHALL REQUIRE ITS INCLUSION IN ANY LOWER TIER SUBCONTRACT, PURCHASE ORDER, OR TRANSACTION THAT MAY IN TURN BE MADE.

- Appendix B of 49 CFR Part 29 -

This certification applies to subcontractors, material suppliers, vendors and other lower tier participants.

Appendix B--Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions

Instructions for Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction, "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

6. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

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

9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions

(1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

STATE REQUIRED CONTRACT PROVISIONS

ALL FEDERAL-AID CONSTRUCTION CONTRACTS

Effective February 1, 1969
Revised January 2, 1973

The following provisions are State of Illinois requirements and are in addition to the Federal requirements.

"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 Contractors 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 or 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.

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SECTION 1

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

1-02 PREQUALIFICATION OF BIDDERS.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) More than one proposal for the same work from an individual, firm, partnership, or corporation under the same or different names.
(b) Evidence of collusion among bidders.
(c) Unbalanced proposals in which the prices for some items are obviously out of proportion to the prices for other items.
(d) If the proposal does not contain a unit price for each pay item listed except in the case of authorized alternate pay items or lump sum pay items.
(e) If the proposal is other than that furnished by the Department; or if the form is altered or any part thereof is detached.
(f) If there are omissions, erasures, alterations, unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.
(g) If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
(h) If the proposal is not accompanied by the proper proposal guaranty.
(i) If the proposal is prepared with other than ink or typewriter.
(j) If the proposal is submitted in any other name other than that to whom it was issued by the Department.

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

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

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

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

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

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

(a) Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

(b) Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner.

(c) If the bidder is considered to be in "default" for any reason specified in the Subsection 1-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

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

SECTION 2

AWARD AND EXECUTION OF CONTRACT

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

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

(a) If the proposal is irregular as specified in the subsection titled REJECTION OF PROPOSALS of Section 1.

(b) If the bidder is disqualified for any of the reasons specified in the subsection titled DISQUALIFICATION OF BIDDERS of Section 1.

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

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

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

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

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

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

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

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

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

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

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

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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS

The requirements of the following provisions written for Federally-assisted construction contracts, including all goals and timetables and affirmative action steps, shall also apply to all State-funded construction contracts awarded by the Illinois Department of Transportation.

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

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

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

APPENDIX A

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

Economic Area	Goal (percent)
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

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Economic Area	Goal (percent)
080 Evansville, IN:	
Non-SMSA Counties -	3.5
IL - Edwards, Gallatin, Hamilton, Lawrence, Saline, Wabash, White	
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	

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Economic Area	Goal (percent)
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	

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

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

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

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

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
   - a) "Covered area" means the geographical area described in the solicitation from which this contract resulted;
   - b) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
   - c) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
   - d) "Minority" includes:
     - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
     - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
     - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
     - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000. the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

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3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

    a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working as such sites or in such facilities.

    b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

    c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractors may have taken.

d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreements; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship of other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations. Revised 08-31-83

p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a Contractor association, joint Contractor-union, Contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specified minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy his requirement, Contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

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ANNUAL EEO-1 REPORT TO JOINT REPORTING COMMITTEE AS REQUIRED AT

41 CFR 60-1.7(a)

Any Contractor having a Federal contract of $50,000 or more and 50 or more employees is required to file annual compliance reports on Standard Form 100 (EEO-1) with the Joint Reporting Committee in accordance with the instructions provided with the form. The Contractor will provide a copy of such a report to the contracting agency within 30 days after the award of a contract.

The Contractor shall require its subcontractors to file an SF 100 within 30 days after award of the subcontract if (1) it is not exempt from the provisions of these regulations in accordance with 60-1.5, (2) has 50 or more employees, (3) first tier subcontractor, and (4) has a subcontract amounting to $50,000 or more.

Subcontractors below the first tier which perform construction work at the site of construction shall be required to file such a report if (1) it is not exempt from the provisions of these regulations in accordance with 60-1.5, (2) has 50 or more employees and has a subcontract amounting to $50,000 or more.

The SF 100 is available at the following address:

Joint Reports Committee
EEOC - Survey Division
1801 "L" Street N.W.
Washington, D.C. 20750

Phone (202) 663-4968

DISADVANTAGED BUSINESS POLICY

I. NOTICE

This proposal contains the special provision entitled "Required 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."

II. 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.

III. 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.

IV. 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).

V. 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.

(Rev. 9/21/92)

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

I. 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. 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. 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 DBE Directory or most recent addendum.

II. 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 federally-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.

III. 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 is 22.77% of 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 this goal. The dollar amount paid to all approved DBE firms performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

IV. CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR: This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. This determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform **7.0%** of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set forth in this Special Provision:

A. The bidder documents that firmly committed 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.

V. DBE LOCATOR REFERENCES: Bidders may consult the DBE Directory as a reference source for DBE companies certified by the Department. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's web site at www.dot.state.il.us.

VI. BIDDING PROCEDURES: Compliance with the bidding procedures of this Special Provision is required prior to the award of the contract and the failure of the as-read low bidder to comply will render the bid nonresponsive.

A. In order to assure the timely award of the contract, the as-read low bidder must submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven (7) working days after the date of letting. To meet the seven (7) day requirement , the bidder may send the Plan by certified mail or delivery service within the seven (7) working day period. If a question arises concerning the mailing date of a 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 as-read low bidder to ensure that the postmark or receipt date is affixed within the seven (7) working days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Plan is to be submitted 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). It is the responsibility of the bidder to obtain confirmation of telefax delivery. The Department will not accept a Utilization Plan if it does not meet the seven (7) day submittal requirement, and the bid will be declared nonresponsive. In the event the bid is declared nonresponsive due to a failure to submit a 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 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. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:

1. The name and address of each DBE to be used;

2. A description, including pay item numbers, of the commercially useful work to be done by each DBE;

3. The price to be paid to each DBE for the identified work specifically stating 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. A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and

5. If the bidder is a joint venture comprised of DBE firms and non-DBE firms, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s).

D. The contract will not be awarded until the Utilization Plan submitted by the bidder is approved. The Utilization Plan will be approved by the Department if the Plan commits sufficient commercially useful DBE work performance to meet the contract goal. The Utilization Plan will not be approved by the Department if the Plan does not commit sufficient DBE performance to meet the contract goal unless the bidder documents that it made a good faith effort to meet the goal. The good faith procedures of Section VIII of this special provision apply. If the Utilization Plan is not approved because it is deficient in a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no less than a five (5) working day period in order to cure the deficiency.

VII. 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% 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 firm does not count toward the DBE goals.

B. DBE as a joint venture Contractor: 100% 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% goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontractor in turn subcontracts to a non-DBE firm does not count toward the DBE goal.

D. DBE as a trucker: 100% 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 contact. Credit will be given for the full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non-DBE company.

E. DBE as a material supplier:

1. 60% goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

2. 100% goal credit for the cost of materials or supplies obtained from a DBE manufacturer.

3. 100% credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

VIII. GOOD FAITH EFFORT PROCEDURES: If the bidder cannot obtain sufficient DBE commitments to meet the contract goal, the bidder must document in the Utilization Plan the good faith efforts made in the attempt 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 could reasonably be expected to obtain sufficient DBE participation. The Department will consider the quality, quantity and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts are not good faith efforts; rather, the bidder is expected to have taken those 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 prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.

5. Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor'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 contractor'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 Contractor 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 a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will

designate a five (5) working day period during which the bidder shall take additional efforts. The bidder is not limited by a statement of additional efforts, but may take other action beyond any stated additional efforts in order to obtain additional DBE commitments. The bidder shall submit an amended Utilization Plan if additional DBE commitments to meet the contract goal are secured. If additional DBE commitments sufficient to meet the contract goal are not secured, the bidder shall report the final good faith efforts made in the time allotted. All additional efforts taken by the bidder will be considered as part of the bidder's good faith efforts. If the bidder is not able to meet the goal after taking additional efforts, the Department will make a pre-final determination of the good faith efforts of the bidder and will notify the designated responsible company official of the reasons for an adverse determination.

C. The bidder may request administrative reconsideration of a pre-final determination adverse to the bidder within the five (5) working days after the notification date of the determination by delivering the request to the Department of Transportation, Division of Aeronautics, 1 Langhorne Bond Drive, Capital Airport, Springfield, IL 62707-8415 (Telefax: 217-785-4533). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The pre-final determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. In addition, the request shall be considered a consent by the bidder to extend the time for award. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten (10) working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid nonresponsive.

IX. 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 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.

A. No amendment to the Utilization Plan may be made without prior written approval from the Division of Aeronautics. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Division of Aeronautics, 1 Langhorne Bond Drive, Capital Airport, Springfield, IL 62707-8415. Telephone number (217) 785-8514. Telefax number (217) 785-4533.

B. All work indicated for performance by an approved DBE shall be performed, managed and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to find another DBE to substitute for the terminated DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. The Contractor shall notify the Division of Aeronautics of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Division and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Division will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.

C. 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 therefor to the DBE by the Contractor, but not later than thirty (30) calendar days after payment has been made by the Department to the Contractor for such work or material without regard to any retainage withheld by the Department, the Contractor shall submit a DBE Payment Report on Department form SBE 2115 to the Division's Chief Engineer. If full and final payment has not been made to the DBE, the Report 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 Plan, the Department will deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages.

D. 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.

Certification of Nonsegregated Facilities - as Required by 41 CFR 60-1.8

(Applicable to (1) contracts, (2) subcontracts, and (3) agreements with applicants who are themselves performing federally assisted construction contracts, exceeding $10,000.00 which are not exempt from the provisions of the Equal Opportunity clause).

By the submission of this bid, the bidder, offeror, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments and that that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder, offeror, applicant, or subcontractor agrees that a breach of his 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, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000.00 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding $10,000.00 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually).

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

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

Instructions for Certification

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction" "debarred" "suspended" "ineligible" "lower tier covered transaction" "participant" "person" "primary covered transaction" "principal" "proposal" and "voluntarily excluded" as used in this clause have the meaning set out in the Definitions and Coverage sections of the rules implementing Executive Order 12540. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective primary participant agrees by submitting this proposal that should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction unless authorized by the department or agency entering into this transaction.
7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Transaction", provided by the department or agency entering into this covered transaction without modification in all lower covered transactions and in all solicitations for lower covered transactions.
8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to check the Nonprocurement List (Tel. #).
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 8 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and
Other Responsibility Matters - Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief that it and its principals:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by an Federal department or agency;

   b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or Local) transaction or contract under a public transaction: violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction or destruction of records, making false statements, or receiving stolen property;

   c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

   d. Have not within a three-period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

CERTIFICATION REGARDING LOBBYING (Applicable to contracts in excess of $100,000):

Certification for Contracts, Grants, Loans and Cooperative Agreements.

The undersigned bidder certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have paid or will be paid, by or behalf of the undersigned, 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 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.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

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.

WORKERS' COMPENSATION INSURANCE

Prior to the execution of his construction contract by the Illinois Department of Transportation, Division of Aeronautics, hereinafter referred to as "Division", the Contractor shall furnish to the Division certificates of insurance covering Workers' Compensation, or satisfactory evidence that this liability is otherwise taken care of in accordance with Section 4.(a) of the "Workers' Compensation Act of the State of Illinois" as amended.

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

SPECIAL PROVISION FOR DOMESTIC SOURCE FOR STEEL

Control of Materials: All steel products, as defined by the Illinois Steel Products Procurement Act, incorporated into this project shall be manufactured or produced in the United States and, in addition, shall be domestically fabricated. The Contractor shall obtain from the steel producer and/or fabricator, in addition to the mill analysis, a certification that all steel products meet these domestic source requirements.

CLAUSE TO BE INCLUDED IN ALL SOLICITATIONS,
CONTRACTS, AND SUBCONTRACTS RESULTING FROM PROJECTS FUNDED UNDER THE AIP

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 or nationals 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 Contractor 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 the 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 upon 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 immediate 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 this 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 false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

MINIMUM WAGES FOR FEDERAL AND FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at http://www.dot.state.il.us/desenv/delett.html.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at http://www.dot.state.il.us/desenv/subsc.html.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: December 1, 2006

Description. For projects with at least 1200 tons of work involving applicable bituminous materials, cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and pavement preservation type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$CA = (BPI_p – BPI_L \times (\%AC_v /100) \times Q$

Where:
- CA = Cost Adjustment, $.
- BPI_p = Bituminous Price Index, as published by the Department @ http://www.dot.il.gov/desenv/asphaltpi.html for the month the work is performed, $/ton.
- BPI_L = Bituminous Price Index, as published by the Department @ http://www.dot.il.gov/desenv/asphaltpi.html for the month prior to the letting, $/ton.
- $\%AC_v$ = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_v will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_v and undiluted emulsified asphalt will be considered to be 65% AC_v.
- Q = Authorized construction Quantity, tons (see below).

For HMA mixtures measured in square yards: Q, tons = A x D x (G_{mb} x 46.8) / 2000. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the base, leveling and surface courses to account for their different G_{mb} and % AC_v.

For bituminous materials measured in gallons: Q, tons = V x 8.33 Ib/gal x SG / 2000

Where:
- A = Area of the HMA mixture, sq yd.
- D = Depth of the HMA mixture, in.
- G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.
- V = Volume of the bituminous material, gal.
- SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPlp in excess of five percent, as calculated by:

Percent Difference = $\{(BPI_L - BPlp) \div BPI_L\} \times 100$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Added 12/01/2006

Return With Bid

ILLINOIS DEPARTMENT OF TRANSPORTATION

OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract?

Yes ☐ No ☐

Signature: _____ **Date:** _____

Added 12/01/2006

SECTION III

Special Provisions
For

CONSTRUCT RUNWAY 13/31 RSA IMPROVEMENTS; EXTEND TAXIWAY B

ILL. PROJ. SPI-3488
AIP PROJ. 3-17-0096-42

At

ABRAHAM LINCOLN CAPITAL AIRPORT

SPRINGFIELD, ILLINOIS

April 24, 2007

4/24/07

RANDALL L. VOGEL
62-048048
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

Randall L Vogel
Exp. 11/30/07

Prepared By:

CRAWFORD, MURPHY & TILLY, INC.
Consulting Engineers
2750 West Washington Street
Springfield, Illinois 62702

GENERAL

These Special Provisions, together with applicable Standard Specifications, Contract Requirements for Airport Improvement Project, Rules and Regulations, 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, Division of Aeronautics, and the representatives of the Springfield Airport Authority for the improvements at Abraham Lincoln Capital Airport, Springfield, Illinois.

GOVERNING SPECIFICATIONS AND RULES AND REGULATIONS

The **"Standard Specifications for Construction of Airports"**, State of Illinois, Department of Transportation, Division of Aeronautics, dated January 1985, and the **"Supplemental Specifications and Recurring Special Provisions"**, dated July 1, 2004, State of Illinois, Department of Transportation, Division of Aeronautics including updates posted at http://www.dot.state.il.us/aero/airspecs.html shall govern the project except as otherwise noted in these Special Provisions. In the case of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern. As noted within the Special Provisions, the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction dated January 1, 2007 shall apply.

INDEX TO SPECIAL PROVISIONS

DIVISION 1 – GENERAL PROVISIONS

SECTION 20 – SCOPE OF WORK

20-05 MAINTENANCE OF TRAFFIC

ADD: The Contractor shall provide his own radio capable of transmitting and receiving on the tower's ground frequency of 121.90 MHz.

The Contractor shall notify the FAA Field Office through the Airport 72 hours prior to working in NAVAID critical areas or in areas where FAA cables or facilities are located.

SECTION 30 – CONTROL OF WORK

30-04 COOPERATION OF CONTRACTOR

ADD: The completion of this project prior to the contract completion date is of extreme importance to the Airport. The Contractor shall update his progress schedule as required for the scheduled progress meetings.

A materials/pre-paving meeting shall be scheduled prior to the start of various paving operations to discuss material acquisition, mixing, placing, testing, etc. The superintendent, paving foreman, batching foreman/material supplier, quality control officer, and the Resident Engineer are required to attend this meeting.

30-06 CONSTRUCTION LAYOUT

DELETE: Section 30-06 of The Supplemental Specifications.

ADD: CONSTRUCTION LAYOUT STAKES

The Contractor will be required to furnish and place construction layout stakes for this project. The Resident Engineer will locate and reference six (6) control points and will establish benchmarks along the line of the improvement outside construction limits. The Contractor shall locate and reference the centerline of survey, which shall also consist of locating and referencing control points such as point of curvature, points of tangent, and sufficient points on tangent to provide a line of sight. Control points set by the Resident Engineer shall be identified in the field to the Contractor, and the field notes shall be kept in the office of the Resident Engineer.

The Contractor shall provide field surveys directed by a registered surveyor or engineer, and set all additional stakes for this project which are needed to establish offset stakes, reference points, slope stakes, pavement and grade, stakes for culverts, sewers and drainage structures, paved gutters, walls, monuments, fence, right-of-way lines, and any other horizontal or vertical controls, including supplementary bench marks necessary to secure a correct layout of the work. Grading slope stakes shall be set at sufficient intervals (not to exceed 100 feet) to accurately outline the slopes. Stakes for line and grade of pavement shall be set at sufficient station intervals (not to exceed 25 feet) to assure substantial conformance to plan line and grade. Staking of right-of-way lines, if applicable, shall consist of placing tall stakes, properly identified and readily discernible, at points of change in width of direction of the right-of-way and at points along the line so that at least two of the stakes can be seen distinctly from any point of the line. Right-of-way lines shall be staked at locations where construction is to be performed prior to beginning construction. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a pay item in the contract, or to determine the property line between properties.

The Contractor shall be responsible for having the finished work substantially conform to the line, grades, elevations and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Resident Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and benchmarks, and shall have them reset at his expense when any are damaged, lost, displaced or removed. The Contractor shall use a registered surveyor or engineer and competent personnel and suitable equipment for the layout work required.

RESPONSIBILITY OF THE RESIDENT ENGINEER

A. The Resident Engineer will locate and reference six (6) control points within the limits of the project.

B. Benchmarks will be established along the project outside of construction lines.

C. Stakes set for A. and B. above shall be identified in the field to the Contractor and the field notes kept in the Resident Engineer's office for references by him.

D. The Resident Engineer may make random checks of the Contractor's staking to determine if the work is in substantial conformance with the plans. Where the Contractor's work will tie into the work that is being or will be done by others, checks will be made to determine if the work is in conformance with the proposed overall grade and horizontal alignment.

E. After the Contractor has staked the drainage structures, the Resident Engineer may check the staking, either visually or by instrument, to determine if the structures fit the waterways in horizontal alignment and vertical elevation. If it is necessary to redesign the drainage structure, the Resident Engineer will furnish a revised design and re-stake the structure.

F. The Resident Engineer will make all measurements and take all cross sections from which the various pay items are to be measured, such as cross sections for all borrow pits and channel changes, additional measurements needed to determine the amount of earthwork and all measurements on which the depth of subbase, bases or pavements are to be verified.

G. Where the Contractor, in setting construction stakes, discovers discrepancies, the Resident Engineer will check to determine their nature and make whatever revisions are necessary in the plans, including the recross-sectioning of the area involved, and all additional restaking necessary.

H. The Resident Engineer will accept responsibility for the accuracy of specific stakes that are covered by random instrument checks and recorded, provided no displacement occurs.

I. It is not the responsibility of the Resident Engineer to check the correctness of the Contractor's stakes, except as provided herein; however, any errors that are apparent shall be immediately called to the Contractor's attention, and he shall be required to make the necessary correction before the stakes are used for construction purposes.

J. All measurements necessary to determine the final pay quantities must be made by the Resident Engineer independently of the Contractor's station stakes and any benchmarks established by the Contractor.

RESPONSIBILITY OF THE CONTRACTOR

A. The Contractor will set all other stakes necessary to establish limits and elevations of the work.

B. Field notes shall be kept in standard survey field notebooks and these books shall become the property of the Division at the completion of the project.

C. It is not considered the responsibility of the Contractor to make a detailed check of the accuracy of the plans; however, it is expected that the Contractor will advise the Resident Engineer promptly of known errors in the plans.

D. The Contractor shall reset the existing control points shown on the plans and establish ties for the reset points.

E. The ties established shall meet the approval of the Resident Engineer.

F. The Contractor will be restricted to iron pins or drill holes for permanent monumentation.

G. The control points to be reset are PIs, PCs, PTs, and POTs.

H. The Contractor shall be required to establish a grid at the edges of each paving line on 25' centers and document elevations prior to placing the PCC and bituminous pavements. These grades shall immediately be provided to the Resident Engineer. The Contractor shall also provide a table showing the existing pavement elevations, proposed pavement elevations and the proposed pavement thickness a minimum of 36 hours prior to paving. If for any reason the proposed pavement thickness thickness is less than the design thickness, the profiles may require adjustment.

I. The Contractor shall immediately notify the Resident Engineer of conflicts or discrepancies with the established control points.

30-12 LOAD RESTRICTIONS

The Contractor shall obtain all necessary permits and temporary easements for the public access road(s) to be used for construction hauling and construction access with the City, Township, Illinois Department of Transportation and/or any agency that maintains the road(s). The Contractor shall be responsible for any damage to the public roadways caused by construction traffic hauling to this project.

The Contractor shall provide, install and maintain any warning signs (trucks entering highway, etc.) as required by the City, Township, County or Illinois Department of Transportation and/or any agency that maintains the roadway.

ADD: At all times, the Contractor shall have on site and available for use a self-propelled, vacuum or regenerative (recirculating) air pavement sweeper utilizing a dust/refuse separator, with a debris hopper mounted on an engine driven truck or vehicle.

30-16 FINAL INSPECTION

DELETE: The first sentence of the first paragraph.

ADD: As the first sentence of the first paragraph.

Upon due notice to the Resident Engineer from the Contractor of presumptive completion of the entire project, the charging of Contract Time shall be suspended and the Engineer will make an Inspection.

ADD: After the first sentence of the second paragraph:

The charging of Contract Time shall resume on the day following the Inspection and shall continue until the remaining work, including the applicable requirements of Section 20-08, Final Clean-up, is completed to the Engineer's satisfaction.

30-18 PLANS AND WORK DRAWINGS

DELETE: Section 30-18 of the Supplemental Specifications.

ADD: The Contractor shall prepare shop, working, or layout drawings for all parts of the work. Before commencing any work or providing any material, the Contractor shall submit for review by the Project Engineer, all drawings relating to the construction arrangement or disposition of the work including drainage and electrical materials entering into the contract, and show the complete materials with manufacturer's specifications of same. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

Prior to submission, the Contractor shall review all shop drawing submittals for accuracy, completeness, and compliance with the contract requirements. The Contractor shall stamp, sign and date each submittal indicating Contractor approval of the submittal.

When submittals require close coordination of a number of products, the Contractor shall coordinate a concurrent submittal of all such products. The Project Engineer may withhold action on a submittal requiring coordination with other submittals until all related submittals are received.

Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Any deviation from contract requirements shall be clearly identified on the shop drawing submittal and supporting documentation for such deviation shall be attached. The Project Engineer reserves the right to rescind inadvertent acceptance of submittals containing unidentified deviations.

Shop drawing submittals shall contain a letter of certification from the manufacturer stating that all materials furnished for the project conform to the contract drawing requirements.

The Project Engineer or his representative shall review shop drawings submitted by the Contractor for materials and/or equipment to be provided as part of the contract. The review of the submittals by the Project Engineer (or his representative) will indicate only that the general method of construction and detailing is satisfactory. Such review will not relieve the Contractor of the responsibility for complying with the contract document requirements or for any error that may exist in the submittal. The Contractor is responsible for the dimensions and designs of adequate connections, detail and satisfactory construction of all work.

The Project Engineer shall note "No Exceptions Taken" or "Resubmit with Corrections". Submittals will not be returned with "Exceptions Taken as Noted". Submittals marked as "Resubmit with Corrections" shall be modified and resubmitted as soon as possible.

Drawings shall be submitted within two weeks after the date of the Notice to Proceed or within six weeks of the Notice of Award whichever occurs first.

The Contractor shall submit at least eight (8) copies of each drawing to be reviewed of which six (6) copies will be retained by the Project Engineer for his use and records. Two (2) copies of each drawing will be returned to the Contractor.

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

PROJECT LOCATION: Abraham Lincoln Capital Airport

PROJECT TITLE: **Construct Runway 13/31 RSA Improvements; Extend Taxiway B**

PROJECT NUMBERS: **Illinois Project: SPI-3488**
AIP Project: 3-17-0096-42

CONTRACT ITEM: **(Pay Item Name & Number)**

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

DATE: **(Date of Submittal)**

SECTION 40 – CONTROL OF MATERIALS

40-11 CERTIFICATION OF MATERIALS

ADD: The Contractor shall certify all materials contained in the contract. Certification and documentation shall be submitted to the Resident Engineer. It shall be the sole responsibility of the Contractor to ensure the delivery of adequate and accurate documentation prior to the delivery of materials. Materials incorporated into this project without approved certification and documentation will not be recommended for payment by the Resident Engineer.

The certification shall be submitted as part of the shop drawing submittal.

As a guide to the certification process and requirements, the Contractor shall use the Illinois Department of Transportation/Division of Aeronautics MANUAL FOR DOCUMENTATION OF AIRPORT MATERIALS (latest edition). Copies of this manual are available from the Illinois Division of Aeronautics. The MANUAL FOR DOCUMENTATION OF AIRPORT MATERIALS defines the Resident Engineer's/Contractor's responsibilities (Sections 300/400). The Contractor shall have the sole responsibility to provide the Resident Engineer with appropriate documentation to satisfy the contract certification requirements prior to the delivery of materials.

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

All submittals shall contain the following information:

PROJECT LOCATION:	Abraham Lincoln Capital Airport
PROJECT TITLE:	Construct Runway 13/31 RSA Improvements; Extend Taxiway B
PROJECT NUMBERS:	Illinois Project: SPI-3488 AIP Project: 3-17-0096-42
CONTRACT ITEM:	(ie., AR751410 – Inlet)
SUBMITTED BY:	(Contractor/Subcontractor Name)
DATE:	(Date of Submittal)

If the Division of Aeronautics requires additional documentation, they shall request it through the Resident Engineer.

SECTION 50 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

50-17 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS

ADD: The Contractor shall be responsible for locating Airport owned utilities.

ADD: To the Contact Table:

Utility Service or Facility	Person to Contact
Military (ILANG)	To be Determined

50-26 CONTRACTOR'S RESPONSIBILITY FOR SAFETY DURING CONSTRUCTION

As a minimum, the Contractor shall be responsible for safety during construction as follows:

(1) Possess a copy of the project construction activity plans.

(2) Comply with the construction activity plans associated with the construction project and ensure that construction personnel are familiar with safety procedures and regulations on the Airport.

(3) Provide a point of contact that will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the Airport.

(4) Provide a supervisor/flagman trained in airport safety to monitor construction activities and provide radio control.

(5) Restrict movement of construction vehicles to construction areas with flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate or as shown in plans.

(6) Ensure that no construction employees, employees of subcontractors or suppliers, or other persons enter any part of the aircraft operations area from construction site unless authorized.

SECTION 60 – PROSECUTION AND PROGRESS

60-05 LIMITATION OF OPERATIONS

ADD: A minimum distance of 95' shall be maintained between construction operations and the centerline of all active taxiways and taxilanes and 250' from centerline of active runways. It is intended to plan, conduct, and complete the work in these critical traffic areas in such a manner that the length and amount of interruption to aircraft traffic at the Airport is minimized.

The Contractor shall comply with Federal Aviation Regulations Part 107 (Airport Security), Federal Air Regulation 139 (Airport Certification), and with all rules and regulations of the Airport, including, but not limited to, control and access to the airfield by Contractor's, employees and agents. In the event the Authority is assessed a fine by a governing agency for breach of security resulting from actions of Contractor's employees and agents, the Contractor shall fully reimburse the Authority for the amount of such fine in the form of additional rents.

60-08 DETERMINATION AND EXTENSION OF CONTRACT TIME

ADD: After the fourth paragraph:

The Engineer will make charges against Contract Time after the presumptive completion of the entire project as provided for in Section 30-16, Final Inspection.

60-13 CONTRACTOR'S ACCESS TO AIRFIELD

ADD: The location of an area for parking by the Contractor's employees shall be as shown on the plans or as agreed to by the Airport.

Use of personal vehicles beyond the staging area will not be allowed.

ADD: The Contractor shall submit a 10-year background and employment check on the Superintendent and supervising Foremen and complete a security form for all personnel he proposes to use on the Airport. These forms shall be completed prior to that person being issued an identification badge and allowed on the airfield. A list of personnel authorized to work on the airfield shall be provided to the Resident Engineer by the Contractor. The Superintendent and Foremen that are issued badges shall be directly responsible for the identity and location of those they are supervising while on the airfield. Badges shall be returned to the Airport once the project is complete or the person is no longer employed by the Contractor.

60-14 SECURITY DURING CONSTRUCTION

As a minimum, the Contractor shall be responsible for security during construction as follows:

(1) Possess a copy of the Airport's project security plan.

(2) Visibly delineate his construction zone by placing a line of barricades or flagging around the entire work zone during each phase of the contract.

(3) Comply with the Airport's security plan associated with the construction project and ensure that construction personnel are familiar with security procedures and regulations on the Airport.

(4) Provide a point of contact that will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational security of the Airport.

(5) Restrict movement of construction vehicles to construction areas with flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate or as shown in plans.

(6) Ensure that no construction employees, employees of subcontractors or suppliers, or other persons enter any part of the aircraft operations area from construction site unless authorized.

(7) The Airport may require that all Security Guards undergo additional training necessary to meet the Airport's security needs.

(8) The Contractor shall be required to maintain security on the Airport as specified or as directed by the Airport.

(9) The Contractor's Superintendent, Foremen, Security Guards, and any supervisory personnel in charge of other workers shall obtain an Airport Authority security badge and display this badge while on site in accordance with Federal Aviation Administration Regulations. Contractor personnel with badges shall be directly responsible for the identity and location of those they are supervising while on the airfield.

(10) The Contractor shall provide, in advance, the Springfield Airport Authority a complete list of personnel that will be employed while on site and update the list as needed.

(11) To obtain Airport Authority security badges, Contractors must complete a Criminal History Records Check two weeks prior to employees being allowed access to the site. The two-week period is necessary for an adequate time of processing fingerprints for completing the criminal history check. The Contractor is required to deposit a $200 fee to the Springfield Airport Authority per badge, which is 80% refundable after each badge is returned. The Authority must receive this fee/deposit prior to conducting any of the security badge issue process. The Contractor is required to contact the Airport Operations Supervisor at least three calendar days prior to scheduling fingerprinting and badge training at 725-3195. Training lasts approximately two hours and can be conducted individually or with a group.

(12) The Contractor shall be responsible for keeping the access gate closed and locked during work hours. If the Contractor chooses to leave the gate open, then he shall post a competent, properly trained Security Guard to prevent unauthorized entries. The Contractor shall replace any unsatisfactory security guards if so directed by the Airport.

(13) The Contractor shall install and maintain a heavy-duty padlock on the access gate. He shall provide keys for this padlock to the Resident Engineer and Airport. No additional keys are to be distributed unless authorized by the Airport.

(14) The Contractor shall provide a sign at all access gates stating "Authorized Personnel Only." All costs relating to Contractor's access and security shall be the responsibility of the Contractor.

DIVISION II – PAVING CONSTRUCTION DETAILS

ITEM 150510 – ENGINEER'S FIELD OFFICE

CHECK SHEET #5

BASIS OF PAYMENT

Payment will be made under:

Item AR150510 – Engineer's Field Office – per lump sum.

ITEM 151 – CLEARING AND GRUBBING

CONSTRUCTION METHODS

151-2.1 GENERAL

DELETE: From the Supplemental Specifications:

The paragraph referencing the Indiana Bat and associated restrictions on tree removal.

ADD:

151-2.12 FOUNDATION REMOVAL

This work shall consist of the removal of existing approach light foundations from the locations shown in the plans. The foundations shall be removed completely and disposed off Airport property.

Excavations resulting from the removals shall be backfilled in accordance with Item 152.

BASIS OF PAYMENT

Payment will be made under:

Item AR151450 - Clearing and Grubbing – per acre.
Item AR800287 - Foundation Removal – per each.

ITEM 152 – EXCAVATION AND EMBANKMENT

DESCRIPTION

152-1.2 CLASSIFICATION

ADD: "Topsoil Stripping" shall consist of stripping the existing topsoil from the proposed borrow area, below the proposed embankments or below the proposed airfield, roadway and shoulder pavements. For the purposes of this specification, topsoil shall consist of the material containing brush, sods, grass, decayed vegetable matter, or vegetation approximately twelve inches (12") in depth for the borrow area and four inches (4") in depth at all other locations.

CONSTRUCTION METHODS

152-2.2 EXCAVATION

ADD: Compaction control tests for aircraft weights of more than 60,000 pounds (ASTM D 1557 - Modified) shall apply the top 8" of subgrade in cut and fill areas.

ASTM D698 shall apply for all other locations.

REVISE: Table 1, Compaction Requirements, to read:

"Embankments outside pavement limits and greater than 8" below subgrade."

152-2.5 PREPARATION OF EMBANKMENT AREAS

ADD: After the first paragraph:

Prior to placing embankment for new pavements, the topsoil as defined in Section 152-1.2 shall be stripped and stockpiled for future use.

152-2.6 STRIPPING

DELETE: This Section.

ADD: Topsoil as defined in Section 152-1.2 shall be stripped within the grading limits before the earthwork is started.

Compressible and/or organic materials shall be removed down to dense material as directed by the Resident Engineer, and replaced with suitable embankment material.

Materials excavated during the stripping process shall not be utilized as embankment under the proposed or future pavements.

Materials excavated during the stripping process shall be stockpiled at a location designated by the Contractor and approved by the Resident Engineer outside of the grading limits and allowed to decay. Upon completion of the earthwork, this material shall be incorporated as directed in Item 905 over the disturbed surface. Excavation, stockpiling and incorporation of this material shall not be measured for payment but shall be considered incidental to Item 152 except as noted herein.

152-2.11 TOLERANCES

ADD: After the first paragraph:

In addition, areas to be lime treated shall meet the requirements of Section 155-6.1.

152-2.12 TOPSOIL

DELETE: The third paragraph.

ADD: Stockpiling of topsoil for later reuse and redistribution shall be done at the Contractor's expense except as noted herein. Stockpiling necessary for respreading shall be considered incidental to the project.

METHOD OF MEASUREMENT

152-3.1, 3.2, 3.3, 3.4

DELETE: These sections.

152-3.5 The quantity of embankment in place to be paid for shall be the number of cubic yards measured in its final position.

For payment specified by the cubic yard, measurement for all embankment in place shall be computed by the average end area method. The end area is that bound by the original ground line established by cross-sections and the final ground line established by embankment cross-sections as shown on the plans.

152-3.6 The quantity of topsoil stripping to be paid for shall be the number of cubic yards of topsoil stripped in the borrow area measured in its original position.

All other topsoil stripping outside the borrow area shall be considered incidental to the project.

152-3.7 Measurement shall not include the quantity of materials excavated or constructed without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

Before any work is started which would affect the measurements, the Contractor shall verify all earthwork quantities shown in the plans are in agreement with earthwork quantities from his own calculations. The Contractor shall notify the Engineer of any discrepancies in quantities.

When the project is constructed essentially to the lines, grades, or dimensions shown on the Plans and the Contractor and the Resident Engineer have agreed in writing by the use of form AER-981 that the plan quantities are accurate, no further measurement will be required and payment will be made for the quantities shown in the contract for the various items involved except that if errors are discovered after work has been started, appropriate adjustments will be made.

When the Plans have been altered or when disagreement exists between the Contractor and the Resident Engineer as to the accuracy of the plan quantities, either party shall, before any work is started which would affect the measurement, have the right to request in writing and thereby cause the quantities involved to be measured as herein specified.

BASIS OF PAYMENT

152-4.1 DELETE: This section.

152-4.5 Payment shall be made at the contract unit price per cubic yard for Embankment in Place. This price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete this item.

152-4.6 Payment shall be made at the contract unit price per cubic yard for Topsoil Stripping. This price shall be full compensation for stripping, stockpiling and spreading and for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item AR152455 – Embankment in Place – per cubic yard.
Item AR152460 – Topsoil Stripping – per cubic yard.

ITEM 155 – LIME TREATED SUBGRADE

DESCRIPTION

155-1.1 ADD: Use of Item 155, Lime Treated Subgrade, shall be the Contractor's option.

EQUIPMENT

155-5.1(i) DISTRIBUTOR

ADD: The Distributor shall be equipped with a skirt at the distribution point to reduce the amount of airborne lime dust.

CONSTRUCTION METHODS

155-6.4 COMPACTION

ADD: Compaction control tests for aircraft weights of more than 60,000 pounds (ASTM D-1557-Modified) shall apply.

BASIS OF PAYMENT

155-8.1 ADD: Payment will be made under:

Item AR155540 – By-Product Lime – per ton.
Item AR155608 – Soil Processing-8" – per square yard.

ITEM 156 – EROSION CONTROL

CHECK SHEET #8

DESCRIPTION

1.1 ADD: The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control through the construction period.

Contractor's temporary control should include work outside the construction limits such as borrow operations, equipment and material storage sites, waste areas, and temporary plant sites.

CONSTRUCTION METHODS

3.9 INLET PROTECTION

The installation and maintenance of the inlet protection shall be at the locations shown on the plans or as directed by the Engineer.

The Contractor shall maintain the inlet protection throughout the duration of the project.

Upon completion or as directed, the Contractor shall remove the inlet protection and restore the area as needed.

METHOD OF MEASUREMENT

4.4 The number of inlet protection structures to be paid for shall be the number satisfactorily installed, maintained and accepted by the Engineer.

BASIS OF PAYMENT

5.1 ADD:

Payment will be made at the Contract Unit Price for each inlet protection installed.

Payment will be made under:

Item AR156510 – Silt Fence – per lineal foot.
Item AR156520 – Inlet Protection – per each.

ITEM 156540 – RIPRAP

CHECK SHEET #10

MATERIALS

2.1 RIPRAP

ADD: The Riprap radation shall be an IDOT Gradation No. 5.

CONSTRUCTION METHODS

3.1 DELETE: The first paragraph.

ADD: The riprap depth shall be as detailed in the plans.

BASIS OF PAYMENT

5.1 Payment will be made under:

Item AR156540 – Riprap – per square yard.

ITEM 201002 – BITUMINOUS BASE COURSE – METHOD II
(Over 2,500 tons/pay item/location)

CHECK SHEET #12

COMPOSITION

201-3.2.1 JOB MIX FORUMULA (JMF)

ADD: Marshall Design Criteria in Table 2 for over 60,000 lbs. shall apply.

CONSTRUCTION METHODS

201-4.9 TRANSPORTING, SPREADING AND FINISHING

ADD: To the second paragraph of the Special Provision:

The Contractor shall alternate the use of stringline/matching shoe and traveling ski as required to maintain the tolerances specified in 201-4.14, Surface Tests.

A slope control system shall not be used in paving operations.

201-4.11 JOINTS

ADD: The following as the fourth paragraph for this section.

At any time during the bituminous base course paving operation it becomes necessary to end a paving lane at a location other than the proposed finished pavement edge because of ending a day's paving, machinery breakdown, etc., the lane end will be sawed back a sufficient distance to provide a smooth, neat appearing joint from which to resume paving. The sawed face will be painted with a liquid asphalt and this work shall be considered incidental to Item 201, Bituminous Base Course, and no additional compensation will be allowed.

BASIS OF PAYMENT

201-6.1 Payment will be made under:

Item AR201610 – Bituminous Base Course – per ton.
Item AR201630 – Bituminous Base Test Section – per each.

ITEM 209 - CRUSHED AGGREGATE BASE COURSE

MATERIALS

209-2.1 ADD: Gradation B shall be used.

CONSTRUCTION METHODS

209-3.6 FINISHING AND COMPACTING

ADD: After the first paragraph:

ASTM D1557 shall apply.

METHOD OF MEASUREMENT

209-4.1 DELETE: This section.

BASIS OF PAYMENT

209-5.1 DELETE: The first sentence.

ADD: Payment will be made at the contract unit price per square yard of the specified thickness for crushed aggregate base course.

Payment will be made under:

Item AR209604 – Crushed Agg. Base Course - 4" – per square yard.

ITEM 401002 – BITUMINOUS SURFACE COURSE – METHOD II
(Over 2,500 tons/pay item/location)

CHECK SHEET #20

COMPOSITION

401-3.2.1 JOB MIX FORMULA (JMF)

ADD: Marshall Design Criteria in Table 2 for over 60,000 lbs. shall apply.

CONSTRUCTION METHODS

401-4.9 TRANSPORTING, SPREADING AND FINISHING

ADD: To the end of the Special Provision:

The Contractor shall alternate the use of stringline/matching shoe and traveling ski as required to maintain the tolerances specified in 401-4.14, Surface Tests.

A slope control system shall not be used in paving operations.

401-4.12 SHAPING EDGES

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

BASIS OF PAYMENT

401-6.1 Payment will be made under:

Item AR401610 – Bituminous Surface Course – per ton.
Item AR401630 – Bituminous Surface Test Section – per each.

ITEM 401655 – BUTT JOINT CONSTRUCTION

CHECK SHEET #25

BASIS OF PAYMENT

Payment will be made under:

Item AR401655 – Butt Joint Construction – per square yard.

ITEM 401665 – BITUMINOUS PAVEMENT SAWING

DESCRIPTION

1.1 This item of work shall consist of sawcutting the edge of the existing pavements to form a vertical face prior to widening or abutting the pavement.

CONSTRUCTION METHODS

3.1 The Contractor shall sawcut the existing pavement structure to the depth shown in the plans at locations determined by the Resident Engineer. Sawcutting shall be completed using a diamond-bladed self-propelled saw. The finished sawcut shall be a smooth vertical surface.

3.2 After completion of sawcutting, the Contractor shall remove the pavement structure using methods which allow a vertical surface along all sides of the removal area.

3.3 Material obtained from removal operations shall be hauled to a disposal site off Airport property by the Contractor as directed by the Resident Engineer. No additional compensation will be made for hauling and disposal of the removed material.

3.4 The sawcut shall not vary more than one-half inch from true line or its designated position.

METHOD OF MEASUREMENT

4.1 The length of bituminous pavement sawing to be paid for shall be the number of linear feet of sawed pavement as measured in the field, completed and accepted by the Engineer.

BASIS OF PAYMENT

5.1 Payment will be made at the contract unit price per linear foot for bituminous pavement sawing. This price shall be full compensation for furnishing all materials, equipment, labor, hauling, disposal and all other incidental items necessary to complete the work to the satisfaction of the Engineer.

Payment will be made under:

Item AR401665 – Bituminous Pavement Sawing – per linear foot.

ITEM 602 – BITUMINOUS PRIME COAT

METHOD OF MEASUREMENT

602-4.1 ADD: The Bituminous Prime Coat to be paid for shall be the number of gallons of undiluted material used and accepted.

BASIS OF PAYMENT

602-5.1 Payment will be made under:

Item AR602510 – Bituminous Prime Coat – per gallon.

ITEM 603 – BITUMINOUS TACK COAT

BASIS OF PAYMENT

603-5.1 Payment will be made under:

Item AR603510 – Bituminous Tack Coat – per gallon.

ITEM 620 PAVEMENT MARKING

MATERIALS

620-2.2 PAINT

ADD:

Paint type shall be 1., Waterborne.

CONSTRUCTION METHODS

620-3.3 PREPARATION OF SURFACE

ADD: Shot blasting will not be allowed.

ADD: All existing marking that is to be re-painted shall be cleaned using high pressure water to remove dirt, grease, laitance, and loose or flaking paint.

ADD: Water blasting equipment shall be adjustable to prevent damage to the pavement.

620-3.4 APPLICATION

DELETE:

Table 1 reference to epoxy paint type.

620-3.7 PAVEMENT MARKING REMOVAL

ADD: Water blasting shall be used for the marking removal.

BASIS OF PAYMENT

620-5.1 Payment will be made under:

Item AR620510 - Pavement Marking – per square foot.
Item AR620900 - Pavement Marking Removal – per square foot.

ITEM 701 – PIPE FOR STORM SEWERS AND CULVERTS

MATERIALS

701-2.1 ADD:

Pipe for storm drains shall be new reinforced concrete pipe meeting the requirements of ASTM C76. All reinforced concrete pipes shall be Class IV.

701-2.6 COMPRESSION JOINTS

DELETE: This section.

701-2.7 TRENCH BACKFILL

Foundation, bedding, cradle and backfill material shall meet the requirements of an IDOT FA-1, FA-2, or FA-6.

CONSTRUCTION METHODS

701-3.3 CRADLE

DELETE: Section 701-3.3 of the Standard Specifications and Supplemental Specifications.

ADD: Granular cradle shall be constructed and compacted prior to the placement of the storm sewer for the entire length of the pipe as detailed in the plans.

Material for the cradle shall meet the requirements of 701-2.7.

Moist cradle materials shall be compacted to the Engineer's satisfaction by ramming or tamping with tools approved by the Engineer.

701-3.6 PIPE JOINTS

DELETE: Paragraphs (a), (b), (d), (e), (f) and (g) of the Standard Specifications.

701-3.7 BACKFILLING

DELETE: Section 701-3.7 of the Standard Specifications and Supplemental Specifications.

ADD: As soon as the condition of the pipe will permit, the entire width of the trench shall be backfilled with moist fine aggregate meeting the requirements specified in 701-2.7 to a height of at least the elevation of the center of the pipe. The fine aggregate shall be placed longitudinally along the pipe. The elevation of the backfill material on each side of the pipe shall be the same. Special care shall be taken to completely fill the space under the pipe. The fine aggregate backfill material shall be placed in 8-inch layers, loose measurement and compacted to the satisfaction of the Engineer by ramming or tamping with tools approved by the Engineer. The fine aggregate used for backfilling shall meet the approval of the Engineer.

The remainder of the trench and excavation shall be backfilled to the natural line or finished surface as rapidly as the condition of the sewer will permit. The backfill material shall consist of the excavated material or of trench backfill, as herein specified. All

backfill material shall be deposited in the trench or excavation in such a manner as not to damage the sewer. The filling of the trench shall be carried on simultaneously on both sides of the pipe in such a manner that injurious side pressures do not occur. The backfill for trenches and excavation made in the subgrade of the proposed improvement shall be made with trench backfill material.

All backfill material up to a height of 12 inches above the pipe shall be carefully deposited in uniform layers not exceeding 8 inches thick (loose measure). The material in each layer shall be firmly compacted by ramming or tamping with tools approved by the Engineer in such a manner as not to disturb or injure the pipe. For backfilling above this height, the material shall continue to be deposited in uniform layers not exceeding 8 inches thick (loose measure), and each layer shall be compacted by ramming or tamping with tools approved by the Engineer.

Under proposed pavements, backfilling shall be with an aggregate material which meets the requirements specified in 701-2.7.

701-3.11 PIPE REMOVAL

DELETE: This section from the Supplemental Specifications.

ADD: This work shall consist of the removal of existing pipes of various types and sizes. Trenches resulting from pipe removal shall be backfilled and compacted in accordance with Item 152, Excavation and Embankment for areas in proposed turf or backfilled and compacted in accordance with Section 701-2.7 and 701-3.7 for areas under proposed pavements. Pipe shall be disposed of by the Contractor off airport property.

Cost for backfill of removal items will be incidental to the removal.

METHOD OF MEASUREMENT

701-4.2 DELETE: This item.

701-4.3 DELETE: This item.

BASIS OF PAYMENT

Payment will be made under:

Item AR701524 - 24" RCP, Class IV – per linear foot
Item AR701542 - 42" RCP, Class IV – per linear foot
Item AR701560 - 60" RCP, Class IV – per linear foot
Item AR701900 - Remove Pipe – per linear foot

ITEM 705 – PIPE UNDERDRAINS FOR AIRPORTS

MATERIALS

705-2.15 POROUS BACKFILL

DELETE: References to IDOT CA-14 or CA-16.

ADD: Porous backfill material shall conform to the requirements of IDOT FA-1 or FA-2, Class A Quality.

CONSTRUCTION METHODS

705-3.6 BACKFILLING

ADD: Backfilling for perforated underdrains shall be as detailed in the plans.

The Contractor may also compact backfill by waterflooding. Waterflooding shall be done by introducing water through holes jetted into the backfill to a point approximately two feet above the top of the pipe. The holes shall be spaced no farther than six feet apart. The water shall be injected at a pressure just sufficient to sink the holes at a moderate rate of speed. The pressure shall be such that the water will not cut cavities in the backfill material nor overflow the surface. Water shall be injected as long as it will be absorbed by the backfill material. Injection shall continue until compaction is completed to the satisfaction of the Engineer.

Costs associated with backfilling and compaction of bedding and porous backfill shall be considered incidental to the cost of the underdrain.

705-3.10 PLUG EXISTING UNDERDRAIN

At locations where existing underdrains are to be abandoned, intercepted or disrupted, the pipes shall be plugged. The plugs shall be constructed of PCC, mortar, epoxy or other methods approved by the Resident Engineer.

BASIS OF PAYMENT

705-5.1 Payment will be made under:

Item AR705524 - 4" Perforated Underdrain w/Sock – per linear foot.
Item AR705544 - 4" Non perforated Underdrain – per linear foot.
Item AR705635 - Underdrain Collection Structure – per each.
Item AR705640 - Underdrain Cleanout – per each.
Item AR705900 - Remove Underdrain – per linear foot.
Item AR705945 - Adjust Collection Structure – per each.

ITEM 751 – MANHOLES, CATCH BASINS, INLETS & INSPECTION HOLES

MATERIALS

751-2.9 PRECAST DRAINAGE STRUCTURES

Pre-cast drainage structures shall meet the applicable requirements of IDOT, Division of Highways, "Highway Standards", where applicable.

CONSTRUCTION METHODS

751-3.9 BACKFILLING

DELETE: Section 751-3.9 of the Supplemental Specifications.

DELETE: Paragraph (a) of the Standard Specifications.

ADD: Backfill materials shall be an IDOT Division of Highways FA1, FA2, CA-06 or CA-10 conforming to IDOT D quality.

BASIS OF PAYMENT

751-5.1 Payment will be made under:

Item AR751415 - Inlet-Special – per each.
Item AR751550 – Manhole 5' – per each.
Item AR751560 – Manhole 6' – per each.
Item AR751900 - Remove Inlet – per each.

ITEM 752- CONCRETE CULVERTS, HEADWALLS AND MISCELLANEOUS DRAINAGE STRUCTURES

BASIS OF PAYMENT

Payment will be made under:

Item AR752460 - Precast Reinforced Conc. FES 60" – per each.
Item AR752900 – Remove End Section – per each.

ITEM 901 – SEEDING

DESCRIPTION

901-1.1 ADD:

Restoration, seeding and mulching beyond the limits of seeding and mulching shown in the plans (such as edge lighting, cabling, signage, access, staging, etc.) shall be incidental to the project.

CONSTRUCTION METHODS

901-3.2 DRY APPLICATION METHOD

DELETE: Paragraph (c), Seeding.

ADD: Grass seed shall be sown at the rate shown in 901-2.1.

Grass seed shall be sown with a machine that is capable of cutting a slit in the soil free from leaves and debris, placing the seed in the slit and compacting the seed into the soil of the slit in one continuous operation.

901-3.3 WET APPLICATION METHOD

DELETE: This section.

BASIS OF PAYMENT

Payment will be made under:

Item AR901510 – Seeding – per acre.

ITEM 904 – SODDING

MATERIALS

904-2.2 LIME

Lime will not be required unless determined necessary by the Contractor.

904-2.3 FERTILIZER

Fertilizer will not be required unless determined necessary by the Contractor.

CONSTRUCTION METHODS

904-3.1 DELETE: First paragraph.

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

904-3.2 PREPARING THE GROUND SURFACE

ADD: The areas to be sodded shall be stripped of vegetation, in accordance with Item 152, thoroughly disced or scarified to a 3" minimum depth, and brought to grade with topsoil as described in Item 152 – Excavation and Embankment.

904-3.3 LAYING SOD

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

904-3.6 WATERING

Sod shall be kept moist until it has become established and its continued growth assured. Watering shall be provided by the Contractor as necessary to promote establishment.

BASIS OF PAYMENT

904-5.1 ADD: Payment will be made under:

Item AR904510 - Sodding – per square yard.

ITEM 905 – TOPSOILING

DESCRIPTION

905-1.1 ADD: Topsoil shall be stripped from excavation and embankment areas and below proposed pavements and stockpiled outside of the grading limits. The surface of all disturbed areas shall be covered with a layer of topsoil, as needed, to facilitate drainage and the growth of turf.

CONSTRUCTION METHODS

905-3.1 GENERAL

DELETE: The first sentence.

ADD: A 2 inch minimum layer of topsoil shall be spread evenly over the disturbed areas outside the proposed pavement to facilitate drainage and the growth of turf.

905-3.3 OBTAINING TOPSOIL

DELETE: The third paragraph.

905-3.4 PLACING TOPSOIL

DELETE: The first sentence and replace with the following:

All stockpiled topsoil shall be placed in a uniform thickness over the disturbed areas outside the proposed pavement to a minimum depth of 2 inches after compaction to promote the growth of turf.

In the borrow area, all stockpiled topsoil shall be placed in a uniform thickness over the previously stripped area to an approximate depth of 12 inches to facilitate future agricultural operations.

BASIS OF PAYMENT

905-5.1 ADD: No individual payment for topsoiling shall be made except as noted in Item 152 related to the borrow area.

ITEM 908 – MULCHING

DESCRIPTION

908-1.1 ADD:

Restoration, seeding and mulching beyond the limits of seeding and mulching shown in the plans (such as edge lighting, cabling, signage, access, staging, etc.) shall be incidental to the project.

MATERIALS

908-2.3 EXCELSIOR BLANKET

Excelsior blanket shall consist of a machine-produced mat of wood excelsior of 80 percent 150 mm (6 inches) or longer fiber length. The wood from which the excelsior is cut shall be properly cured to achieve adequately curled and barbed fibers.

The blanket shall be of consistent thickness, with the fiber evenly distributed over the entire area of the blanket. The excelsior blanket shall be covered on the topside with a 90-day biodegradable extruded plastic mesh netting having an approximate minimum opening of 16 x 16 mm (5/8" x 5/8") to approximate maximum opening of 50 x 25 mm (2"x1"). The netting shall be entwined with the excelsior mat for maximum strength and ease of handling.

The excelsior blanket shall comply with the following Specifications:

Minimum width
±25 mm (1 inch) ..... 600 mm (24")

Minimum mass (weight)
±10% ..... .34 kg/m^2(0.63 lb/sy)

Minimum length of roll, m (ft.), approximately ..... 45m (150 ft)

The excelsior blanket shall be smolder resistant and shall withstand the following test:

The excelsior blanket specimen shall not flame or smolder for more than a distance of 300 mm (12 inches) from a spot where a lighted cigarette is placed on the surface of the blanket.

Certification. The manufacturer shall furnish a certification with each shipment of excelsior blanket stating the number of rolls furnished and that the material complies with these requirements.

CONSTRUCTION METHODS

908-3.1 MULCHING

REVISE: The second paragraph of the Supplemental Specification to read:

The hydraulic mulch shall be applied as a slurry of 3,000 pounds of mulch and not less than 3,000 gallons of water per acre.

BASIS OF PAYMENT

908-5.2 ADD: Payment will be made at the contract unit price per square yard for excelsior blanket. This price shall be full compensation for furnishing all materials and for placing and anchoring the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item AR908510 - Mulching – per acre.
Item AR908520 - Excelsior Blanket – per square yard.

DIVISION VI – LIGHTING INSTALLATION

ITEM 101 – INSTALLATION OF AIRPORT ROTATING BEACONS

DESCRIPTION

101-1.1 ADD: This item shall also include the removal of the existing rotating beacon and delivery to the Airport maintenance facility.

EQUIPMENT AND MATERIALS

101-2.2 BEACON

ADD: The proposed rotating beacon shall be a Hali-Brite, HBM 400PS, Class 2, L-802A Rotating Beacon or approved equal.

101-2.5 WIRE

DELETE: This item.

ADD: 600V wire shall conform to Fed. Spec. J-C-30, Types TW, THW and THWN. Wire shall be two #12 THWN, one #12 Ground.

CONSTRUCTION METHODS

101-3.1 PLACING THE BEACON

DELETE: This item.

ADD: The existing beacon shall be disconnected and turned over to the Airport maintenance facility. The new beacon shall be mounted on the existing beacon tower.

101-3.7 DELETE: This item

ADD: The Contractor shall replace the existing beacon power wiring from the transclosure at the base of the beacon tower (total one-way cable distance is less than 100') with two #12 THWN, one #12 Ground in the existing conduit. Note that conduit also includes the wireless radio antenna cable that goes up the beacon tower. Contractor shall exercise caution to avoid damage to this cable. If the Contractor damages the cable, it shall be replaced in its entirety at no additional cost to the contract.

METHOD OF MEASUREMENT

101-4.1 ADD: This item shall also include the disconnection of the existing beacon. Replacement of existing power wiring is considered incidental to this item.

BASIS OF PAYMENT

101-5.1 ADD: Payment shall also be full compensation for disconnection of existing beacon and delivery to Airport maintenance facility and for replacement of existing power wiring.

Payment will be made under:

Item AR101510 – Airport Rotating Beacon – per each.

ITEM 107 – INSTALLATION OF AIRPORT 8-FOOT AND 12-FOOT WIND CONES

DESCRIPTION

107-1.1 DELETE: This Section

ADD: This item shall consist of relocating an existing supplemental eight-foot airport wind cone assembly in accordance with this specification and the dimensions, design, and details shown in the plans.

This item shall also include the furnishing and installation of cable, splice cans, ground rods, conduit and foundations. The item shall also include all cable connections and terminations.

This item shall also include the testing of the installation, and all incidentals necessary to place the wind cone in operation as a completed unit to the satisfaction of the Engineer.

EQUIPMENT AND MATERIALS

107-2.1 GENERAL

DELETE: This Section.

ADD:
a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall have the prior approval of the FAA, and shall be listed in Advisory Circular (AC) 150/5345-53, Current Edition, Airport Lighting Equipment Certification Program, including the current Addendum.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the Engineer.

c. The Contractor is responsible for using the latest editions of the referenced FAA Advisory Circulars, including any changes, in effect at the time of bidding. The advisory circulars may be obtained free of charge on the internet at the following address:

http://www.faa.gov/airports_airtraffic/airports/resources/advisory_circulars/

107-2.2 WIND CONES

DELETE: This Section.

107-2.3 WIRE

DELETE: This Section.

ADD: The furnishing and installation of the wires for the wind cone relocation shall be incidental to this item. Wire shall conform to the requirements of Item 108, Installation of Underground Cable for Airports.

107-2.4 CONDUIT

DELETE: This Section.

ADD: Conduit for wind cones shall be specified under Item 110, Installation of Airport Underground Electrical Duct. However, the furnishing and installation of this conduit shall not be paid for separately, but shall be considered incidental to the relocation of the wind cones.

107-2.6 PAINT

DELETE: This Section.

107-2.7 REINFORCING STEEL.

Reinforcing steel bars shall meet the requirements of Item 610.

107-2.8 GROUND ROD

Ground Rod shall be ¾" diameter by 10' long copperclad ground rod. Connection of ground wire to ground rod shall be via exothermic weld, Cadweld, or equivalent.

CONSTRUCTION METHODS

107-3.2 COUNTERWEIGHT

DELETE: This Section.

107-3.3 ELECTRICAL CONNECTION

DELETE: This Section.

ADD: The Contractor shall furnish all labor and materials and shall make complete electrical connections as required to make the wind cone operational.

107-3.4 BOOSTER TRANSFORMER

DELETE: This Section.

107-3.5 GROUND CONNECTION AND GROUND ROD

DELETE: This Section.

ADD: The Contractor shall furnish and install a ground rod and grounding cable for grounding the equipment as detailed on the plans. The ground rod shall be of the diameter and length specified on the Plans and shall be copper or copper clad. The ground rod shall be driven into the ground adjacent to the concrete foundation so that the top is at least 12 inches below grade. The grounding cable shall consist of No. 6 AWG or No. 8 AWG as indicated bare stranded copper wire and shall be attached to the ground rod via exothermic weld, Cadweld, or equivalent. Bolted connections shall not be acceptable. The other end of the grounding cable shall be securely attached to the equipment with noncorrosive metal and shall be of substantial construction. The resistance to ground shall not exceed 25 ohms.

107-3.6 PAINTING

DELETE: This Section.

107-3.7 LAMPS

DELETE: This Section.

107-3.8 CHAIN AND PADLOCK

DELETE: This Section.

METHOD OF MEASUREMENT

107-4.1 DELETE: This Section.

ADD:

Measurement will be made by the number of wind cones relocated as completed units in place, accepted, and ready for operation.

BASIS OF PAYMENT

107-5.1 DELETE: This Section.

ADD:

Payment will be made at the contract unit price for each completed and accepted Wind Cone relocation. This price shall be full compensation for furnishing all materials and for all preparation, assembly and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

Item AR107960 – Relocate Wind Cone – per each.

ITEM 108 – INSTALLATION OF UNDERGROUND CABLE FOR AIRPORTS

DESCRIPTION

108-1.1 ADD: This item of work shall include the following:

Installation of:

1. (1) – 1/C, #8, L-824, 5KV, Type C Cable in Unit Duct (Edge Lighting Series Circuits).
2. (2) – 1/C, #8, L-824, 5KV, Type C Cables in Common Unit Duct (Runway 13/31 Homerun).
3. (2) – 1/C, #6, L-824, 600V, Type C & (1) #8 Ground Cables in Common Unit Duct (REIL Homerun).
4. (2) – 1/C, #8, L-824, 600V, Type C & (1) #10 Ground Cables in Common Unit Duct (PAPI Homerun).
5. (2) – 1/C, #8, L-824, 600V, Type C & (1) #10 Ground Cables in Common Unit Duct (Incidental to Windcone Relocation).
6. (3) – 1/C, #1, Type U.S.E. & (1) #6 Bare Copper Ground Cables in Common Trench (Runway 31 MALSR Threshold Bar Circuit).

EQUIPMENT AND MATERIALS

108-2.2 CABLE

REPLACE: All references in the Supplemental Specifications to L-824, 1/C, Type C, 600V cable with:

ADD:

RHW-2 / USE-2 WIRE

Cable shall be 600 Volt rated, type RHW-2 & USE-2 sized as indicated on the drawings. Cable shall comply with Underwriters Laboratories Standard U.L. 44 (for Type RHW-2) and U.L. 854 (for Type USE-2) and shall pass the IEEE 383, 70,000 BTU/hr and VW-1 Flame Tests. Cables shall be rated for use at 90°C in both wet and dry locations and be suitable for use in conduit, underground service entrance cable and direct burial applications.

108-2.4 CABLE CONNECTIONS

ADD:

(b) Below-Grade 600V Splice. Where 600V cable splices are made in splice cans or direct burial, they shall be in-line splices, ILSCO USPA-350SS-DB, or equivalent. Splices shall be waterproof and UL listed for direct burial.

ADD:

(e) Above-Grade 600V Splice. For splices of 600V cable above grade in junction boxes or equipment enclosures, the connectors shall be Buchanan B-Cap "Twist & Seal" wire connectors, or equivalent. Connectors shall be rated for 600 Volt maximum. Connectors shall be pre-filled with an epoxy sealant that hardens after twisting/mixing to form a permanent bond. Connectors shall be water, vibration, and corrosion resistant. Connector

shall utilize a live-action, square-wire spring. Connector Shell shall be rated for 105° C. Connector shell shall be flame-retardant nylon.

108-2.6 UNIT DUCT

ADD: Unit duct shall be 3/4" minimum.

108-2.9 LINE MARKING TAPE

DELETE: This section.

CONSTRUCTION METHODS

108-3.3 TRENCHING

REVISE: In the Supplemental Specifications:

18" to 24"

108-3.5 BACKFILLING

DELETE: This section from the Supplemental Specifications.

108-3.6 RESTORATION

ADD: Restoration, seeding and mulching of disturbed areas beyond the limits shown in the plans shall be incidental to the project.

108-3.8 SPLICING

ADD: Splices of 600V cables shall be installed per manufacturer's instructions.

108-3.10 TESTING

DELETE: This section from the Supplemental Specifications.

ADD: All testing shall be performed in the presence of the Engineer.

The existing field circuits within the working limits of this contract, which are not scheduled to be added or deleted from, shall be meggared BEFORE any work is performed in the presence of the Engineer. Any subsequent damage to these existing circuits shall be immediately repaired at no cost to the contract such that meggar readings taken after completion of the repair shall be, as a minimum, equal to the reading taken before the work began.

Two types of tests are to be conducted on each existing circuit, which is to be added to or modified **before** any work is performed, as follows:

(a) Disconnect the cables from the constant current regulator and measure the end to end conductor resistance of the airfield lighting cable loop using an ohmmeter and record the measured value. Compare the measured value with the value calculated by multiplying the total cable length (in thousand feet) times the published cable resistance in Ohms per thousand feet. Large discrepancies, 1k Ohms or more, indicate faulty connections, splices, or bad cable.

(b) With the airfield lighting cables disconnected, measure the cable insulation resistance, from the conductor to ground, using a 500V minimum megohm meter (megger). Test each cable for a minimum of one minute to allow readings to stabilize before recording the test values. For new cable, insulation resistance should be 50 megohms for cable less than 10,000 feet long, 40 megohms for cable 10,000 to 20,000 feet long and 30 megohms for cable over 20,000 feet long. For cables 20 years old, the values would be approximately 0.5 megohms, 0.4 megohms and 0.3 megohms respectively and values less than these indicate faulty cable insulation, connectors, splices or a damaged cable.

If test measurements indicate a faulty existing cable, notify the Owner so repairs can be made.

New cables or cable segments shall be tested after installation as defined in (a) and (b) above. New cable insulation resistance should measure a minimum of 50, 40, or 30 megohms, depending upon length, as described in (b) above.

New cables for visual NAVAIDS and other devices shall be tested after installation, but before connection to those devices.

New cables installed by the Contractor that do not meet the requirements above shall be replaced by the Contractor at his expense.

108-3.13 TERMINATIONS AND CONNECTIONS

REPLACE:

"Cast Splice Kit" with "In-Line Splice Kit" in the third paragraph of the Supplemental Specifications.

METHOD OF MEASUREMENT

108-4.2 DELETE: This Section.

BASIS OF PAYMENT

108-5.1 DELETE: Item #2 of Supplemental Specifications.

Payment will be made under:

Item AR108158 - 1/C #8 5 KV UG Cable in UD – per linear foot.
Item AR800250 - 2-1/C #8 5 KV UG Cable in UD – per linear foot.
Item AR800288 - REIL Homerun – per linear foot.
Item AR800289 - PAPI Homerun – per linear foot.
Item AR800290 - MALSR Threshold Bar Circuit – per linear foot.

ITEM 109 – INSTALLATION OF AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT

DESCRIPTION

109-1.1 ADD: Note that work will be done at the existing Airfield Lighting Vault and at the existing Air Traffic Control Tower. The following major items of work will be included under this Item:

A. Runway 13/31 20KW Regulator Installation:
- Installation of two 20KW regulators, 480V input, 5-step, 6.6A output.

B. Installation of a complete, turn-key L-890 Airport Lighting Control and Monitoring System as detailed and specified herein and in compliance with FAA Advisory Circular 150-5345-56, latest edition.

C. Removal of existing L-821 Airfield Lighting Control System as detailed and specified herein.

109-1.2 EXISTING L-821 AIRFIELD LIGHTING CONTROL SYSTEM OPERATION

The following is a general description of the current operation of the existing L-821 Airfield Lighting Control System, and is based on the best available record drawings, and does not relieve the Electrical Contractor of his responsibility to verify all aspects of the existing system's operation, control, equipment and wiring, etc., prior to commencing the work.

Currently, the existing lighting control system consists of an L-821 Control Panel located in the Control Tower, hard-wired to equipment in the nearby Airfield Lighting Vault. The following equipment are controlled:

a. Ckt. R-1: Runway 4/22 regulator (5-step).
b. Ckt. R-2: Runway 13/31 regulator (3-step).
c. Ckt. R-3: Runway 18/36 regulator (3-step).
d. Ckt. T-1: Taxiway C(S) & H regulator (3-step).
e. Ckt. T-2: Taxiway B(E) & Y regulator (3-step).
f. Ckt. T-3: Taxiway D(INT) regulator (3-step).
g. Ckt. T-4: Taxiway E(W) regulator (3-step).
h. Ckt. T-5: Taxiway G & F(W) regulator (3-step).
i. Ckt. T-6: Taxiway B(W) & J regulator (3-step).
j. Ckt. T-7: Taxiway A(NE) & F(E) regulator (3-step).
k. Ckt. T-8: Taxiway A(SW) regulator (3-step).
l. PAPI 13 (On/Off).
m. REIL 13 (Auto/On). Currently labeled "Leave in Auto."
n. Wind Cone 13 (Auto/On).
o. Wind Cone 31 (Auto/On).
p. PCAL (On/Off).
q. Emergency (Vault Generator) Power (Indicating Light).
r. Beacon (On /Off).

At the Airfield Lighting Vault, the control wiring is routed as follows:

a. All Runway and Taxiway regulator brightness control wiring, except Runway 18/36 regulator brightness control wiring, is routed to an enclosure containing a series of transfer relays for the L-854 PCAL system. When the ATCT is occupied, the brightness control wiring from the ATCT controls the

associated runway or taxiway regulator. When the PCAL switch in the ATCT is placed in the "ON" position, the transfer relays are energized and the associated runway and taxiway regulators brightness steps are controlled by the PCAL system. Runway 18/36 regulator brightness control wiring bypasses the PCAL transfer relays and goes directly to the regulator.

b. PAPI 13, REIL 13, Wind Cone 13 and Wind Cone 31 Auto/Off control wiring is routed to an enclosure with electrically-held contactors and On-Off-Remote selector switches, one for each PAPI, REIL and Wind Cone. When the selector switch is in the "Remote" position, the L-821 switches in the ATCT control the associated PAPI, REIL or Wind Cone.

   NOTE: The existing enclosure has a selector switch for "REIL 31," however this REIL was removed when the Runway 31 ILS system was installed.

c. The Beacon On/Off control wiring from the ATCT is transmitted via 900 MHz spread-spectrum radio from the Airfield Lighting Vault to the Beacon.

d. The Generator indicating light wiring is routed to the generator automatic transfer switch.

e. Additionally, Runway 04/22 and Runway 13/31 brightness control wiring, whether controlled from the L-821 panel in the ATCT or from the PCAL system, is routed to a "regulator select" control panel that permits selecting from either a "normal" regulator or a "backup" regulator for each runway circuit. This control panel contains transfer relays that transfer brightness control wiring from the "normal" regulator to the "backup" regulator and also control associated L-847 Circuit Selector Switches to transfer the series circuit wiring from the "normal" to the "backup" regulator.

EQUIPMENT AND MATERIALS

109.2.1 GENERAL

REVISE: Paragraph (a) of Supplemental Specifications as follows:

Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall have the prior approval of the FAA, and shall be listed in Advisory Circular (AC) 150/5345-53, Current Edition, Airport Lighting Equipment Certification Program, including the current Addendum. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the Engineer. The Contractor is responsible for using the latest editions of the referenced FAA Advisory Circulars, including any changes, in effect at the time of bidding. The advisory circulars may be obtained free of charge on the internet at the following address:

http://www.faa.gov/airports_airtraffic/airports/resources/advisory_circulars/

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/existing 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.

All materials and equipment used to construct this item shall be submitted to the Engineer for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be boldly and clearly made with arrows or circles (highlighting is not acceptable). Contractor is solely responsible for delays in project accruing directly or indirectly from late submissions or resubmissions of submittals.

The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Contractor's submittals (five (5) copies) shall be neatly bound in a properly sized 3-ring binder, tabbed by specification section. The Engineer reserves the right to reject any and all equipment, materials or procedures, which, in the Engineer's opinion, does not meet the system design and the standards and codes, specified herein.

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 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.

109-2.21 FAA-APPROVED EQUIPMENT

ADD: The following FAA approved equipment is to be used on this project:

L-828, Constant Current Regulator, 20 KW, 480V, single phase primary, 6.6 AMP maximum, 5-Step Brightness secondary, as manufactured by Flight Light (formerly Sola/Hevi-Duty), Model # 20KW-L828-I-5-D-6-IA, to maintain compatibility with existing regulators installed at the Airport. Two (2) regulators will be required. Regulator shall be Ferroresonant or Saturable Reactor design. All-Solid-State design regulators are not acceptable. Regulator shall be a self-contained unit of the static type with no moving parts requiring attention or service. Internal input fusing shall be provided. Positive open circuit and over-current protection in the event of a fault shall be provided. All control circuitry shall be behind a hinged door for accessibility. Input and output lightning arrestors shall be included. Power factor capacitor shall be provided and provide a power factor of 96% or better, at full load and maximum brightness. All controls, including brightness relays, shall be in the air-filled control cabinet. Regulator shall have provision for both external 120V control and internal 120V control. Regulator shall be equipped with internally mounted remote control operated primary contractor with 120VAC operating coil.

Provide engraved phenolic nameplates for regulators. Nameplates and legend plates shall be engraved three-layer laminated plastic, black letters on white background. Legends shall read as follows:

- RWY 13/31 (CKT. R-2)
- RWY 13/31 BACKUP

(Note that additional FAA approved equipment as part of the L-890 Airport Lighting Control and Monitoring System is specified elsewhere in this Item.)

109-2.22 OTHER ELECTRICAL EQUIPMENT

ADD: Furnish two (2) 60A, 3-Pole, 480 VAC, thermal magnetic circuit breaker in busway plug-in housing, suitable for use with existing Square D plug-in busway. The Amp Interrupting Rating (AIR) of the proposed circuit breaker shall have a minimum rating of the existing circuit breakers.

109-2.24 LIQUIDTIGHT FLEXIBLE CONDUIT

Liquidtight flexible metal conduit shall consist of polyvinyl jacket over flexible hot dip galvanized steel tubing. Flexible conduit shall be completely sealed from liquids, dust, dirt and fumes, be resistant to oil, gasoline, grease and abrasion. Jacket shall also be sunlight resistant. Flexible conduit shall be U.L. listed and comply with Article 351 of NEC. Flexible conduit shall be Flexi-Guard Type UAG, as manufactured by O-Z/Gedney, or equal. Conduit and installation shall comply with all requirements in NEC Article 350.

109-2.25 L-890 AIRPORT LIGHTING CONTROL AND MONITORING SYSTEM

NOTE: The Airport Lighting Control and Monitoring system has been designed and specified based on a Crouse-Hinds L-890 ALCMS. However, any L-890 ALCMS in complete compliance with FAA Advisory Circular (AC) 150-5345-56, current edition, and furnished by an approved L-890 ALCMS manufacturer, as listed in Advisory Circular (AC) 150/5345-53, Current Edition, Airport Lighting Equipment Certification Program, including the current Addendum, shall be acceptable. The L-890 ALCMS shall provide the control and monitoring features shown on the Plans and as outlined in the Specifications.

An L-890-C-A ALCMS shall be provided. The regulator monitors shall comply with requirements for L-827 Monitors as specified in Advisory Circular (AC) 150-5345-10, current edition. The L-890 ALCMS shall provide control and monitoring as shown on the Plans and as specified for the Wind Cones, PAPI, REIL, Beacon, Generator and ATS.

A. A complete and pre-tested "turn-key" L-890 Airport Lighting Control and Monitoring System (ALCMS) shall be furnished as shown on the Plans and Specifications, and in complete compliance with FAA Advisory Circular 150-5345-56, current edition. The ALCMS shall be furnished by an approved L-890 ALCMS manufacturer, as listed in Advisory Circular (AC) 150/5345-53, Current Edition, Airport Lighting Equipment Certification Program, including the current Addendum, and be a FAA approved supplier of Constant Current Regulator Monitors in accordance with FAA Advisory Circular 150/5345-10, current edition. This work shall include software, programming, computers, manuals, on-site commissioning, on-site testing, on-site training and any other materials, tools and equipment to provide a fully functional and complete system to the satisfaction of the owner.

B. DETAILED SPECIFICATIONS

1. The ALCMS system shall be a PC-based distributed computerized control and monitoring system (DCCMS) based on a network ready system that operates within a Windows XP™ operating environment. The airport lighting control system is the interface between the air traffic control tower operator and the airport lighting systems. It is essential that the system be reliable and simple to maintain by airport personnel. It is therefore required that the proposed DCCMS shall incorporate "open system" distributed architecture and be easily upgradeable. The database shall be

object oriented and constructed by choosing elements from a foundation that contains a wide range of airport related functional elements. These functional elements shall include objects ranging from the basic CCR to such objects as an RVR interface. An Ethernet communication network shall be used for data transfer between the electrical vault, control tower and maintenance center.

2. The computerized airfield lighting control and monitoring system shall be comprised of the following major hardware components:

   a. Touchscreen control station located in the tower cab.
   b. Tower computer subsystem consisting of an industrial enclosure, industrial tower computer, communication equipment and laserjet printer.
   c. Vault computer subsystem consisting of an industrial enclosure, industrial vault computer, touchscreen, communication equipment and a redundant vault control / monitoring network.
   d. Maintenance Center subsystem consisting of a PC computer and color inkjet multifunction printer.

   Within the airfield lighting vault shall be a distributed control and monitoring system, which operates on a redundant communication network. The Distributed Control and Monitoring Interface (DCMI) shall be of a distributed nature that shall be installed locally at each controlled element within the vault. The vault industrial computers communicate to each DCMI via two (2) shielded cables each comprised of one (1) twisted pair. The system shall monitor the operation of the various lighting systems per AC 150/5345-10 (current edition) requirements.

3. The tower workstation, electrical vault and maintenance center computers shall communicate with each other via the following communication networks:

   a. Tower to Vault:
      Fiber Optic Ethernet:
      The fiber optic cables shall be multimode, 850nm wavelength, 62.5/125 micron fiber cable. Each fiber communication link requires 2 fibers. All fiber optic cable shall be terminated at a fiber optic patch panel within each subsystem prior to being terminated at the communication equipment. Fiber optic patch cables shall be provided from the fiber patch panel to the vault computer cabinet. Fiber optic cable shall be terminated with ST style connectors at the fiber optic transceivers located within the vault computer cabinet.

   b. Tower to Vault (redundant system) and Tower to Maintenance Building:
      Wireless Ethernet:
      The wireless network shall use frequency hopping, spread spectrum radios. The wireless Ethernet network shall use the 2.4 GHz ISM band and allow license-free operation. The wireless system shall combine advanced technology, antenna diversity, digital signal processing to assure secure, reliable wireless communication. The wireless communication network shall support data rates of up to 3Mbps, with automatic fall-back to 1Mbps when necessary. A site inspection shall be performed in order to determine antenna types and mast sizes. The antennas and masts shall be provided by the ALCMS manufacturer.

4. Computers.

   a. Technical Specifications:

1. All the industrial-grade computers in the ALCMS system shall be identical and have the following technical specifications:

	Options	Description
a.	Type	Industrial-grade computer
b.	Processor Type	Pentium IV
c.	Processor Clock Rate	2.5 GHz or better
d.	Memory Capacity	1 GB RAM, expandable to 2 GB
e.	Diskette Drives	1.44 MB, 3.5"
f.	Hard Disk	160 GB or larger, Serial ATA (SATA)
g.	Internal Cache Memory	512 MB or better
h.	CD-ROM	48X or faster*
h.	Video	SVGA Card, support 1024 X 768 or better with 32 MB of video RAM or better
i.	Ports	1 Parallel, 2 serial, 2 USB or better
j.	Keyboard	Standard in an Industrial 19" Shelf
k.	Mouse	3-Button; scroll-type
l.	Software	Operating system: Windows XP Graphic User Interface: (GUI): ILOG Views. Data Base Software: Microsoft Access

* One of the industrial grade computers shall have a R/W CD Drive for backup purposes.

2. Desktop type computer in the ALCMS system shall have the following technical specifications as a minimum:

	Options	Description
a.	Type	Desktop
b.	Processor Type	Pentium IV
c.	Processor Clock Rate	2.5 GHz or better
d.	Memory Capacity	1 GB RAM, expandable to 2 GB
e.	Diskette Drives	1.44 MB, 3.5"
f.	Hard Disk	250 GB or larger, Serial ATA (SATA)
g.	Cache Memory	512 KB or better
h.	CD-ROM	Dual/Layer DVD w/±R and ±RW Plextor PX-716SA, or equivalent. Include identical 2nd DVD Drive for making copies.
i.	Graphics Accelerator Board	(DVI/AGP-8x) 128 Mb (minimum)
j.	Video	19" LCD
k.	Mouse	3-Button; scroll-type; wireless design.
l.	Keyboard	101 Key (minimum) wireless design.
m.	Internal Modem	56k, V.90 compatible.
n.	Sound	3-Piece stereo speaker system with sub-woofer.
o.	Ports	2-Serial, 1-Bidirectional parallel, 2-USB 2.0 minimum, 1-Firewire.
p.	Network Interface Card (NIC)	Ethernet 10/100bps, w/RJ-45 jack.
q.	Operating system	Windows XP
r	Software:	Microsoft Office Professional (Word, Excel, Access, Power Point, latest edition).

s. Printer, Scanner, Fax, Copy HP OfficeJet 7410, or equivalent

A surge suppressor shall be provided for protecting the Maintenance Building equipment from electrical surges and lightning. The surge suppressor shall also contain an input/output RJ-11 jack for the telephone line in order to protect the modem from electrical surges and lightning.

b. Industrial computer in the electrical vault shall interface with the airport network and with the redundant vault communication network. The local redundant vault network shall consist of two (2) shielded twisted pairs necessary to connect the vault industrial computer with the distributed control and monitoring subsystem (DCMI). This communication link must be an industry standard network type specially designed for industrial applications. The communication speed for this network must be 1.25 MB or faster. The computer shall be capable of independently carrying out the following functions:

1. Decode all commands received and transfer them to the corresponding Distributed Control and Monitoring Interface (DCMI) unit for execution via the redundant vault communication network.

2. Any status change at the Constant Current Regulators (CCRs) and other controllable items will be immediately transmitted by the DCMI units to the vault workstation computers without waiting for the computers interrogation.

3. Transfer the status of the CCRs and other controllable items to the control tower computer and maintenance center computer.

4. Continuously check for proper operation of all the communication networks connected to the computer.

5. Continuously check for proper operation of the vault distributed control and monitoring network.

6. Duplicate the tower control and graphical displays for allowing authorized control from the vault. The vault touchscreen shall not be able to initiate lighting commands unless the control tower authorizes control to the vault.

7. The vault shall also duplicate the maintenance center status information.

c. The tower computer shall be capable of independently carrying out the following functions:

1. Receive commands from the touchscreen control station and transfer lighting and other control commands to the vault for execution.

2. Receive the airfield lighting status information from the vault and transfer the status to the touchscreen control station.

d. The Maintenance Building computer shall be capable of independently carrying out the following functions:

1. Provide real-time and historical information on the status of the airfield lighting systems and other controlled and monitored items.

2. Provide information as to the time, type, location and nature of system problems, alarms or warnings.

3. Print out current and historical data reports to an associated printer.

e. The touchscreen technology shall be integrated into the display monitor(s) and shall have the following technical specifications:

Options	Description
1. Technology	Surface Acoustical Wave (SAW)
2. Screen Resolution	1024 X 768 minimum
3. Accuracy	Standard deviation error is less than ±.080 in.
4. Approvals	FCC Class A and UL approved
5. Chemical Resistance	The active area of the touchscreen is resistant to all chemicals that do not affect glass.
6. Temperature / Relative Humidity	-20°C to 40°C at 90% RH, non-condensing
7. Electrostatic	Tested per IEC 801-2
8. Construction	Surface durability is that of glass, Mohs' hardness rating of 7
9. Face Plate	Anti-glare: 5:3 minimum
10. Optical clarity	90% over visible light spectrum

f. The touchscreen video graphics display shall have the following technical specifications:

Options	Description
1. Type	LCD Active matrix TFT flat screen
2. Mounting	19" rack-mount or flush mount in console
3. Size	20.1"
4. Screen Resolution	1024 X 768 minimum

The touchscreen video graphics display shall be designed to either be installed in a 19" computer rack or can be flush mounted into a cabinet console.

g. Tower Equipment

1. Computer

   a. The tower computer shall be a 19" industrial rack-mount computer. Please refer to the "Computers" section for more detailed information regarding the technical specifications of the computer. 120 VAC, uninterruptible power supply shall be supplied to the computer.

2. Touchscreen Monitor

   a. The touchscreen shall be a 20.1" Active matrix LCD display. The touchscreen shall be mounted in the tower cab console. 120 VAC, uninterruptible power shall be supplied to the touchscreen.

3. Local Service Monitor

a. The local service monitor shall be a 19" LCD monitor display. The local service monitor shall be mounted on a shelf within the tower computer equipment enclosure. 120 VAC, uninterruptible power shall be supplied to the monitor.

4. Video / Serial Communication Extension equipment

a. A Video / Serial Communication extension Receiver box shall be installed in conjunction with each touchscreen display under the tower cab console. 120VAC, uninterruptible power shall be supplied to the Receiver box. A Video / Serial Communication extension Transmitter box shall be installed in conjunction with the tower computer located in the tower sub-junction. A Video / Serial extension cable shall be installed between the Receiver and Transmitter boxes.

5. Audible Alarm assembly

a. An audible speaker shall be installed in conjunction with each touchscreen display. An audio cable shall be installed between the audible speaker and the tower computer located in the tower sub-junction.

6. Uninterruptible Power System

a. An uninterruptible power system (UPS) shall be provided for supporting power of the tower equipment. The UPS shall be capable of supplying full load power for 12 minutes after loss of main input power. The UPS shall be a 19" rack-mount unit installed in the tower computer equipment enclosure.

7. Industrial Enclosures

a. A NEMA 12 industrial enclosure shall be provided for housing associated tower computer equipment. The enclosure shall be an industry standard 19" rack-mount type enclosure, 90" tall, with roll-out shelf for keyboard and mouse.

h. Vault Equipment

1. Computer

a. The vault computers shall be 19" industrial rack-mount computers. Please refer to the "Computers" section for more detailed information regarding the technical specifications of the computer. 120 VAC, uninterruptible power shall be supplied to the monitor.

2. Touchscreen Monitor

a. The touchscreen shall be a 20.1" Active matrix LCD display. The touchscreen shall be mounted in the industrial enclosure. 120 VAC, uninterruptible power shall be supplied to the touchscreen.

3. Uninterruptible Power System

a. An uninterruptible power system (UPS) shall be provided for supporting power of the vault equipment. The UPS shall be capable of supplying full load power for 12 minutes after loss of main input power. The UPS shall be a 19" rack-mount unit installed in the vault computer equipment enclosure.

4. Industrial Enclosures

a. A NEMA 12 industrial enclosure shall be provided for housing associated vault computer equipment. The enclosure shall be an industry standard 19" rack-mount type enclosure, 90" tall, with roll-out shelf for keyboard and mouse.

i. Vault Control and Monitoring Equipment

The distributed control and monitoring interfaces (DCMI) shall be Transtech Control Digitrac Interface or equivalent. The control and monitoring equipment shall be of a distributed nature and shall not be PLC based. The DCMI units shall be installed locally at each device (i.e. CCR) which requires control and/or monitoring within the airfield lighting electrical vault. The DCMI shall be built as plug-in modules into a passive backplane that includes one common display module and separate control and monitoring modules. The connection of the DCMI to the control system shall utilize a quick method of attachment. The interface device shall not consume more than 3 watts of power and shall be powered by a dedicated UPS. Each DCMI will get its unique address downloaded via the vault redundant network and stored in a non-volatile memory.

1. General

a. Each CCR and each controllable item shall be connected to a DCMI. The DCMI shall be a microprocessor based module that includes all of the communication, control commands, input/output interface and failsafe functionality. The DCMI shall be connected to both networks associated with the Redundant Communications Network (RCN) via quick disconnects. The DCMI can communicate back to the Vault computer via either of the 2 networks. The DCMI shall be a universal device that can be used on any type of CCR and/or controlled element from any manufacturer. Each DCMI shall be identical and have interchangeable components.

2. Redundant Vault Control and Monitoring Network

a. A Redundant Communication Network (RCN) using two (2) independent communication networks shall be installed in the electrical vault. The RCN shall use two (2) cables each consisting of one (1), 18-22AWG, shielded twisted pair with a common (drain wire) meeting Level 4 cable specifications. The network shall be used to control and monitor all the various controllable elements located within the vault such as CCRs, Control Panels and Generator/ATS.

b. Each controllable element shall be interfaced to a DCMI (see section to follow). Any malfunction in one network shall not affect the operation of the system. Any malfunction in one of the DCMI networks, transfers communication to the other network without affecting system functions.

3. Overview of Operation

   a. Each DCMI unit shall have a unique address stored in a non-volatile memory. This address shall be field programmable it can be downloaded and changed by the vault computer via the vault redundant network. The DCMI receives commands via the RCN, executes those commands, and transfers back the status of the element to the vault computer. The DCMI shall perform the following functions:

      1. Brightness setting control of the CCR(s) or ON/OFF control as required by the controlled element.

      2. Monitoring of status changes (generator).

      3. CCR output voltage and current monitoring.

      4. CCR status monitoring (i.e. remote/local, loss of input power).

      5. Monitor all requirements per FAA L-827 monitoring requirements (See Monitoring section).

      6. Perform all failsafe functions.

      7. Communication via both networks to the vault computers.

      8. Self-diagnostic function to monitor for proper operation.

      9. Locally store all data and parameters specific to the controlled

4. Sub-Components

   a. The DCMI unit shall consist of seven (7) sub-modules all housed on one single board:

      1. Power supply module- supplies DC voltages to the various modules of the DCMI.

      2. Central processing unit with built in memory.

      3. 2 independent Communication network modules- receives and transmits data on the vault communication network.

      4. Command output module, for controllable item switching with mechanically latched relays providing the final output contact.

      5. Fail-safe module, which insures proper operation of the CCR or controllable item if the DCMI fails or is disconnected.

      6. Monitoring module- monitors the status of the series circuit(s) connected to the CCR or other controllable item.

      7. DCMI erasable memory (Flash Memory) for DCMI address and parameters. This allows easy change of address and parameters so

the device can be used at any location and for any item being monitored.

5. Control and Monitoring

   a. The DCMI unit shall provide full FAA L-827 monitoring per FAA AC 150/5345-10 (current edition). The DCMI shall provide the following information for each CCR:

      1. Loss of input power to the CCR.
      2. CCR shutdown by open-circuit / over-current protective devices.
      3. Drop of more than 10% in the CCR VA load.
      4. Failure of the CCR to deliver the selected output current.
      5. The number of burnt-out lamps in each series circuit.
      6. Remote / Local status of the CCR.
      7. Actual CCR output current
      8. Actual CCR output voltage
      9. Actual CCR output load (wattage)

      NOTE: Additional hardware will be required at each regulator to provide this monitoring capability, and shall be provided at no additional cost to the contract.

   b. The ALCMS shall provide Automatic Transfer Switch (ATS) monitoring of generator at Airfield Lighting Vault, which shall also be viewable from the Touchscreen Control Station in the Tower. The ALCMS system shall provide the following status monitoring at the vault:

      1. The ALCMS shall monitor the following status points provided by the ATS equipment:

         a. Generator Available
         b. Generator On-line
         c. Utility Available
         d. Utility On-line

      2. The ALCMS shall monitor the following status points provided by the Generator status panel equipment:

         a. Low Oil Pressure
         b. Over Crank (Failure to Start)
         c. Low Engine Jacket Water Temperature
         d. High Engine Jacket Water Temperature
         e. Overspeed
         f. Low Fuel Tank Level

Locating and wiring of the input points within the Generator and the ATS equipment shall be completed by the contractor in coordination with the airport/engineer and equipment manufacturer (if required).

6. Programming

   a. Each DCMI unit shall have a unique address and specific parameters, which are field-programmable. Downloading of the DCMI's parameters shall be done from the electrical vault industrial computer.

   b. The control system shall continuously scan all the DCMI units and detect any malfunctioning units as well as inconsistency between the commanded brightness step and the actual brightness step. Each DCMI unit shall transmit internal diagnostic information to the control system and provide detailed information regarding its operating status. Any malfunction can easily be isolated to the exact location through the use of troubleshooting and diagnostic screens available at the vault computer.

   c. A portable computer, when connected to the DCMI's RS232 port, shall be able to perform the following functions:

      1. Monitor the commands being received at the DCMI unit.

      2. Perform brightness step switching of the CCR.

      3. Monitor the communications status of the Redundant Communication network.

      4. Read all the status information of the CCR (i.e. Remote/Local)

      5. Read the current, voltage and wattage of the CCR.

7. Communication

   a. Each DCMI unit shall support a data communication rate of 1.25 Mbaud. The communication protocol shall include adequate security to prevent unauthorized access to the network. The protocol shall be designed for speed and reliability in highly critical applications. The protocol shall support end to end acknowledgment with automatic retries. A node ending a message will expect an acknowledgment from all intended receivers and will automatically retransmit the message unless all intended receivers respond. The protocol shall support Request/Response messaging. An application running on one node shall be able to request data from an application running on another node and receive the requested data. The protocol shall support communications on a variety of wire and wireless media.

   b. The protocol shall use a collision prediction algorithm which permits a channel to carry its maximum capacity, rather than have its throughput degraded due to excess collisions. For applications that must limit the maximum delay incurred by nodes with high-priority messages, the protocol shall offer an optional priority feature. Using priority, the highest priority node is guaranteed access to the medium as soon as transmission of any message in progress is completed. The protocol

shall include adequate security that rejects unauthorized access to the network without using complex encryption of data that can reduce throughput.

8. Failsafe

   a. Each DCMI unit shall provide a self-contained failsafe feature that shall perform the following functions:

      1. Insure default operation of the airport lighting, even if the entire airport lighting control system is not functioning.

      2. Display the commands sent by the computer to the CCR's and/or to other controllable items.

      3. Self-monitor the DCMI outputs and verify proper commands are executed.

      4. Adaptable to each CCR regardless of internal or external control voltage.

      5. Permit maintenance of portions of the control system, without changing the operational status of the lighting system.

   b. The failsafe mode of each DCMI unit shall be defined per the requirements of the airport/owner. The failsafe modes are as follows:

      1. Active Failsafe mode: This mode shall be executed as follows:

         a. If the CCR was switched ON before the failure, it shall remain ON at the same brightness level.

         b. If the CCR was switched OFF before the failure, it shall switch ON to a pre-determined brightness level.

      2. Passive Failsafe mode: This mode shall be executed as follows:

         a. If the CCR was switched ON before the failure, it shall remain ON at the same brightness level.

         b. If the CCR was switched OFF before the failure, it shall remain OFF.

      3. Technical Specifications

         a. The failsafe system shall operate independently of the computer, providing failsafe interfacing to the CCR and/or other controllable elements. The failsafe system shall be based on electromechanical latching relays each with 2 contacts one set used for load/switching, the other set to provide feedback to the computer on the status of the switching relay, and indicators of the command sent to the load. Failsafe components shall have the following characteristics:

Specification	Rating

Maximum switching voltage	240VAC, 125VDC
Nominal switching capacity	8A / 250VAC 5A / 30VDC
Rated current	3A
Operational Life	100,000,000 operations
Ambient Conditions Temperature Range	-55° to +90°C
Protection:	IP67 (protection against ingress of dust and water in harmful quantities).
Approval	UL

9. Mode of Operation

   a. The commands executed by the DCMI to switch the CCR and/or controllable element shall be momentary commands. The control commands shall be mechanically latched upon execution.

   b. Failure of the DCMI and/or loss of communication to the network shall not change the status of the airport lighting.

   c The active failsafe mode shall be triggered by the internal watchdog of the DCMI unit upon detection of a failure within the DCMI unit or with the control system. The watchdog shall activate the failsafe and switch any controllable items that are OFF to their predetermined state.

D. MAN-MACHINE INTERFACE OPERATIONAL REQUIREMENTS

1. General

   a. The Air Traffic Control Tower touchscreen display shall control and monitor the airfield lighting system. The display shall show real-time information on the operational status of the airfield lighting systems. The touchscreen control station shall consist of multiple touchscreen 'pages' each with a specific function. These touchscreen 'pages' shall be defined by the airport/owner in conjunction with Air Traffic Control requirements. Typical touchscreen 'pages' include the following:

      1. Preset Page: Consists of pre-defined preset buttons used to simplify airfield lighting control commands.

      2. Runway Page: Consists of runway control touch buttons used to individually control runway circuits. Multiple runway pages may be necessary for airports with several runways.

      3. Taxiway Page: Consists of taxiway control touch buttons used to individually control taxiway circuits. Multiple taxiway pages may be necessary for airports with several taxiways.

      4. Utility Page: Consists of miscellaneous functions for calibrating the touchscreen, granting lighting control to other locations, setting date and time etc.

   b. All preset and control configurations shall be defined by the airport/owner in conjunction with Air Traffic Control requirements. The ALCMS manufacturer

shall provide preset tables to be used by the airport/owner to define the configuration settings. This information will be reviewed by airport and air traffic control personnel before being submitted to the ALCMS manufacturer. Minor changes in the preset tables shall be allowed during the Factory Acceptance Testing (FAT).

2. Overview of Operation

   a. Airfield lighting control commands are entered into the system by touching the corresponding touch button on the touchscreen video display. When a command is entered, the touchscreen shall respond by graphically displaying the button as being depressed and change the button color.

   b. The tower computer shall register the command, generate a data instruction and transmit the command to the vault computer for implementation. The command is also simultaneously transmitted to the maintenance computer and all other computers connected to the network.

   c. The tower touchscreen shall receive confirmation from the vault that the corresponding equipment has responded to the control command and display the current system status on the touchscreen display.

   d. In the event that communications is lost between the tower and vault, an alarm shall be indicated at each computer location.

3. General ALCMS Functions

   a. The ALCMS shall include the following functions:

      1. Audible Alarm: The audible alarm shall sound at each touchscreen display when an alarm condition occurs. The audible alarm shall stop automatically after ten (10) seconds or if the 'ALARM SILENCE' button is pressed.

      2. Communication Status: The communications status shall be displayed at each touchscreen display and indicate the current status of the communication links of the ALCMS. 'Green' indicates that communications is OK and 'Red' indicates that there has been a communication failure. Details of the communication failure can be viewed on the 'ALARM DISPLAY' Page.

      3. The ALCMS shall continuously monitor the actual brightness of all activated lighting by monitoring the actual series circuit current. If the brightness level requested and the actual brightness differs, an alarm shall be given at the touchscreen display.

      4. The air traffic controllers shall have operational control of the ALCMS at all times, unless permission is granted to operate the lighting system from another touchscreen location.

4. Touchscreen Command Sequences

   a. The touchscreen control station shall allow the airfield lighting circuits to be controlled individually (i.e. RWY Edge) or as a group based on preset tables (See following section). Each control command shall require two distinct operator actions in order for the command to initiate any state changes of the airfield lighting. The command sequence shall be as follows:

1. Select circuit: Operator selects the desired circuit to be changed.

2. Select intensity: Operator selects the desired brightness step that the circuit is to be changed to.

3. Confirm/Reject: Operator selects the 'EXECUTE' button to confirm the selection and initiate the lighting change. Operator selects the 'CANCEL' button to reject the selections and make another selection.

5. Touchscreen Preset Sequences

a. The touchscreen control station shall allow for simultaneous airfield lighting circuit changes that shall be accomplished with preset lighting sequences. The preset lighting sequences shall be defined by the airport in airfield lighting preset tables. Each preset lighting change shall be based on the following operator inputs:

1. Active Runway Selection: Operator selects the runway(s) that will be active. This is based on runway direction (i.e. 15L or 18R)

2. Day/Night Setting: Operator selects the day/night setting. The day/night setting will affect the intensity of the circuits.

3. Visibility: Operator selects a single visibility setting that will be based upon the Runway Visual Range (RVR) options of the airport.

4. Confirm/Reject: Operator selects the 'EXECUTE' button to confirm the preset selections and initiate the lighting change. Operator selects the 'CANCEL' button to reject the selections and make another preset selection.

5. Upon confirmation of the preset selections, the intensity of all the circuits associated with the preset condition shall automatically change to match the visibility requirement.

E. PROJECT COORDINATION

1. ALCMS manufacturer shall provide an experienced and qualified Engineering, Sales and Service staff to support the contractor and airport throughout the installation and life of the system. The project shall follow this basic cycle of events:

Milestone	Description
Specifications submitted	ALCMS manufacturer submits ALCMS specifications to the contractor
Submittal review and approval	Submittal is reviewed by contractor, airport, and engineers
Production Release	ALCMS manufacturer releases approved system to manufacturing
Production	System is manufactured
Production Testing	System is tested by ALCMS manufacturer's engineering
Factory Acceptance Testing	System is available for Factory Acceptance Testing (FAT) witnessed by airport/owner
Shipment of system	Approved system is shipped to installation site

Installation	Contractor installs equipment and complete external wiring
Commissioning	ALCMS manufacturer arrives at installation site to complete commissioning of system and verify contractor installation and wiring
System Acceptance Testing	System is available for System Acceptance Testing (SAT) witnessed by airport/owner
Manuals	ALCMS manufacturer issues operator manuals, maintenance manuals, ATC manuals and final as-installed system prints
Training	ALCMS manufacturer completes on-site training of maintenance and ATC personnel
Final Owner Acceptance	Upon completion of all contractual requirements, system is accepted in writing by the airport/owner
Warranty and Support	ALCMS manufacturer provides warranty and support per the contractual requirements

2. Factory Acceptance Test (FAT)

   a. Prior to shipment, the ALCMS system shall be assembled as an operating system at the ALCMS manufacturer's test facilities. Detailed test plan describing all aspects of the factory testing shall be submitted for owner's engineer approval. ALCMS manufacturer shall coordinate a one (1) day Factory Acceptance Testing (FAT) at their facilities for representative(s) of the owner to witness system operation and authorize shipment based on successful completion of the test.

   b. The contractor shall incur the cost of the FAT, including travel and accommodations.

3. Installation and Commissioning

   a. The contractor shall be responsible for the physical installation of all associated ALCMS components. At a minimum, this includes the computer cabinets, touchscreen control stations, Distributed Control and Monitoring Interfaces (DCMI), fiber optic cable, radio communications, redundant network, conduit and wiring, and Maintenance Building computer.

   b. ALCMS manufacturer shall perform the following installation and commissioning tasks:

      1. Verify Contractor connections including power, control and monitoring.
      2. Perform all hardware calibrations.
      3. Perform system testing including control, monitoring and diagnostic.
      4. Perform System Acceptance Testing (SAT).

4. System Acceptance Test (SAT)

   a. Detailed field test plan shall be submitted for owner's engineer approval. Following the final installation, commissioning and calibration of the system, ALCMS manufacturer shall perform a demonstration of the system performance. This demonstration shall include the following:

      1. Control functions

2. Monitoring functions
3. Alarm functions
4. Print functions
5. Display functions

b. As part of the SAT, the system must also complete one (1) week of continuous operation.

5. Operation and Maintenance Manuals

a. ALCMS manufacturer shall provide four (4) typewritten, easy to understand hard cover instruction manuals suitable for daily operation and maintenance of the system. The instruction manuals shall include as a minimum the following information:

1. Operational overview and system description
2. Logic and block diagrams.
3. Graphical User Interface Screen operation
4. User configuration tools instruction manual
5. System Block Diagram
6. Drawings and data sheets of major system components.
7. Detailed external wiring diagrams (Electrical Contractor wiring)
8. Detailed assembly drawings and wiring diagrams
9. Original Equipment Manufacturer (OEM) Manuals

b. ALCMS manufacturer shall provide four (4) operation manuals for the Air Traffic Controllers (ATC) that are hard-covered and suitable for daily operation of the system. At a minimum, the manuals shall include the following information:

1. Touchscreen operation (human machine interface)
2. Touchscreen maintenance (i.e. calibration)

6. On-site Training

a. After the SAT is complete, ALCMS manufacturer shall provide three (3), one-day training classes for maintenance personnel. This training shall include discussion and review of the following:

1. System block diagram
2. Theory of Operation
3. System assemblies
4. System wiring diagrams
5. Graphical User Interface (GUI) Screens (Hands-on)
6. Touchscreen Operation
7. Maintenance and Troubleshooting (Hands-on)

b. During the on-site training period, ALCMS manufacturer shall provide two (2), one-day training classes (16 hours) for the Air Traffic Controllers (ATC). The ATC training shall take approximately 2 hours and thus several training classes can be scheduled.

c. ALCMS manufacturer shall be given at least two (2) weeks prior notice before performing on-site training classes.

7. Owner System Acceptance

a. Upon successful completion of the SAT, On-site training and any open 'punch list items', the owner shall issue the ALCMS manufacturer a written system acceptance letter within five (5) working days.

b. The date of the project final acceptance shall represent the start of the warranty period.

8. System Warranty

a. All equipment shall be warranted against defects in workmanship, hardware and software for a period of twelve (12) months after final acceptance of the project.

9. System Support

a. The ALCMS manufacturer's Service Department shall provide technical assistance and support during the warranty period. The Service Department shall provide 7 days a week / 24 hours a day support phone line. The support phone number shall be specified in the submittal. The ALCMS manufacturer shall provide free phone consultation and technical support as required during the warranty period and if necessary shall be on-site within 24 hours. The ALCMS manufacturer shall provide as part of the bid, a preventative maintenance program consisting of two (2) trips during the warranty period. The owner has the option to extend this package at any time during the warranty period.

10. Spare Parts

a. A recommended spare parts list shall be included with the Submittal including part numbers and pricing. These prices shall be valid for (12) months from date of substantial completion. At a minimum, the spare parts list shall include the following components:

One Touchscreen
One Computer, Pentium, 800MHZ, 128MB RAM, 20GB HD, 48X CD-ROM, SVGA Video Card
One Distributed Control and Monitoring Interface (DCMI) Assembly
Two Potential Transformers (PT)
Two Current Transformers (CT)
Two Ethernet Fiber Optic Transceivers, Multimode or Single Mode based on the fiber installed
One ISA Network Card
One Vault Local Network Card

CONSTRUCTION METHODS

109-3.19 L-890 AIRPORT LIGHTING CONTROL AND MONITORING SYSTEM

A. **Construction Sequencing:** As a life-safety issue, it is imperative that a detailed Construction Sequence be developed by the L-890 ALCMS supplier in conjunction with the Contractor and ATCT personnel, with the intent of maintaining ATCT control of all airfield items controlled by the existing L-821 Airfield Lighting Control System during its replacement. This may entail installing the L-890 ATCT touchscreen and associated equipment in a temporary console while switchover to new L-890 ALCMS is performed, and subsequent disconnection and removal of existing L-821 panel and wiring between ATCT and Vault. Inconveniences to ATCT personnel shall be kept to

a minimum, and never without ATCT personnel permission. A detailed schedule and description of the Sequence of Operation shall be presented to the ATCT personnel and the Owner for their review, comments and approval.

B. In Airfield Lighting Vault, the Contractor shall install rack-mounted industrial-grade computer, keyboard and mouse in rack mount enclosure where directed by the Owner. Provide 120 VAC circuits from existing panelboard as required by ALCMS supplier. Install Distributed Control and Monitoring Interface (DCMI) units next to equipment controlled in conformance with ALCMS supplier requirements. Install redundant communication network between DCMI units and Vault computer in conformance with ALCMS supplier requirements. Install radio receiver (Tower to Vault redundant communications) per ALCMS supplier requirements. Install and earth lightning arrestor per ALCMS supplier requirements. Install PT's, CT's and additional parts and materials in the existing and new regulators as required to provide the monitoring and control specified. Install conduit and wiring as required. All building penetrations shall be done in a neat and workmanlike manner. All penetrations shall be waterproofed. All supporting brackets and hardware shall be firmly attached to structures utilizing bolted connections or welding. Before commencing with work, all installation methods shall be submitted for review and approved in writing by Owner's representative.

C. The Contractor shall install fiber optic cable between Airfield Lighting Vault and ATCT, in existing spare conduit. Route up vertical pipe chase to Tower Equipment Room or as directed by the Owner. Provide strain relief for cable. Install conduit as required.

D. In ATCT, the Contractor shall install rack-mounted industrial-grade computer, keyboard and mouse in rack mount enclosure in control tower equipment room or where directed by the Owner. Provide 120 VAC circuits from existing panelboard as required by ALCMS supplier. The Contractor shall install the touchscreen and related hardware in the Tower cab. Contractor shall connect touchscreen to Tower Computer per ALCMS requirements. Install radio transmitter (Tower to Vault redundant communications) and radio transmitter (Vault to Maintenance Building communications) per ALCMS supplier requirements. Install and earth lightning arrestors per ALCMS supplier requirements. Install conduit and wiring as required. All building penetrations shall be done in a neat and workmanlike manner. All penetrations shall be waterproofed. All supporting brackets and hardware shall be firmly attached to structures utilizing bolted connections or welding. Before commencing with work, all installation methods shall be submitted for review and approved in writing by Owner's representative.

E. At the Airport Maintenance Building, the Contractor shall install the computer system where directed by the Owner. Install radio receiver (Vault to Maintenance Building communications) per ALCMS supplier requirements. Install and earth lightning arrestor per ALCMS supplier requirements. Install conduit and wiring as required. All building penetrations shall be done in a neat and workmanlike manner. All penetrations shall be waterproofed. All supporting brackets and hardware shall be firmly attached to structures utilizing bolted connections or welding. Before commencing with work, all installation methods shall be submitted for review and approved in writing by Owner's representative.

F. At a time and date with ATCT personnel written approval, the Contractor shall switch over from the existing L-821 Airfield Lighting Control System to the new L-890 ALCMS. This changeover should be performed in 8 hours or less. It may be

necessary to perform this work during night-time hours, at no additional cost to the contract.

G. Once the switchover to the new L-890 ALCMS has been made, the Contractor shall disconnect and remove the existing L-821 Airfield Lighting Control System. This work shall include, but not be limited to, the following:

1. Disconnect and remove L-821 Control Panel in ATCT. Discard offsite. If not used for L-890 touchscreen, provide cover plate for opening.

2. Remove existing L-821 control wiring between ATCT and Airfield Lighting Vault. Discard offsite.

3. In Vault, disconnect and remove existing terminal cabinet, transfer relay cabinet and regulator control terminal cabinet, including conduit and wiring. Unless directed otherwise by the Owner, the Contractor shall turn these cabinets over to the Owner. Plug openings in existing wireway.

4. Disconnect and remove wiring between existing regulator control terminal cabinet and regulators, including conduit and wiring. Discard offsite. Plug openings in existing wireway.

   Note that, for Runway 4/22 and Runway 13/31 regulators, the wiring removal shall be from regulator control terminal cabinet to the regulator select control panel. Additional removals and additions shall be as detailed on the Plans.

5. Disconnect and remove existing PCAL Radio Interface Units, including conduit and wiring. Plug openings in existing wireway. Turn Radio Interface Units over to the Owner.

   Note that the existing L-854 Radio Controller shall remain and be incorporated into the new L-890 ALCMS.

H. AS-INSTALLED DRAWINGS

The ALCMS Manufacturer shall provide four (4) hard copies of As-Installed drawings after system acceptance. The As-Installed drawings shall include the following information:

1. System Block Diagram
2. System External Wiring Diagrams
3. Assembly Drawings
4. Assembly Wiring Diagrams

The As-Installed drawings shall be 11" X 17" in size and shall be spiral bound or supplied in 3-ring binders. The cover of each binder shall be labeled with all project-related information.

METHOD OF MEASUREMENT

109-4.1 THRU 109-4.3

DELETE: These Sections.

109-4.1 VAULT MODIFICATIONS

The quantity of vault improvements to be paid for under this item shall consist of all 480V power equipment for each 20 KW regulator installed (except for the regulators themselves and the L-890 ALCMS), connected and accepted as a complete unit ready for operation, including 60A plug-in busway circuit breaker, power wiring, liquidtight flexible conduit, miscellaneous material, equipment and labor necessary as a completed and accepted unit.

This item shall also include the disconnection of two existing 15 KW regulators and their relocation in the Vault.

109-4.2 20 KW REGULATOR

New L-828 regulator installation shall be counted as each installation including all labor and material to provide and install regulator in vault as a completed and accepted unit. Miscellaneous work in the vault necessary to install the new regulator shall be included in the regulator price, including all materials and labor.

109-4.3 L-890 AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM

The quantity of lighting control system to be paid for under this item shall consist of a new L-890 Airfield Lighting Control and Monitoring System as detailed and specified herein, connected and accepted as a complete unit ready for operation, including, but not limited to, Tower cab touchscreen, ATCT industrial computer, radio transmitters and antennas, fiber optic cable, Vault industrial computer, Distributed Control and Monitoring Interfaces (DCMI), redundant DCMI control and monitoring network, radio receiver and antenna, PT's and CT's, Maintenance Building computer, radio receiver and antenna, power and control wiring, conduit, mounting hardware and supports, miscellaneous material, equipment and labor necessary as a completed and accepted unit.

109-4.4 EXISTING L-821 AIRFIELD LIGHTING CONTROL SYSTEM REMOVAL

The quantity of L-821 Airfield Lighting Control System removal shall consist of the disconnection and removal of the existing L-821 Airfield Lighting Control System, including, but not limited to, removal of L-821 Panel, removal of wiring between ATCT and Airfield Lighting Vault, removal of existing terminal cabinet, transfer relay cabinet and regulator control terminal cabinet, including conduit and wiring, as specified herein. Work shall include all miscellaneous material, equipment and labor necessary as a completed and accepted L-821 removal.

BASIS OF PAYMENT

Payment will be made under:

Item AR109210 – Vault Modifications – per lump sum.
Item AR109342 – 20 KW Regulator, Style 2 – per each.
Item AR109620 – Lighting Control System – per lump sum.
Item AR800291 – Remove L-821 System – per lump sum

ITEM 110 – INSTALLATION OF AIRPORT UNDERGROUND ELECTRICAL DUCT

EQUIPMENT AND MATERIALS

110-2.8 UNDERGROUND DUCT INSTALLATION BY DIRECTIONAL BORING

Duct for directional boring shall meet the requirements of Section 108-2.6. The Contractor may provide the cable in duct or install the cable in duct after boring.

Underground ducts shall be installed under existing pavements by directional boring. The Contractor shall dewater the pits as necessary. The Contractor shall install the underground ducts in a manner that will not damage any existing underground utilities or pavements. The top of the ducts shall be at least 24 inches below the existing surface.

CONSTRUCTION METHODS

110-3.4 DUCT MARKERS

DELETE: This section.

ADD: This item shall consist of the installation of an In-Pavement Duct (Survey) Marker at the location of existing and proposed duct banks or utility crossings as detailed in the plans as directed by the Engineer.

This work shall be coordinated with the locating of existing utilities as required by Sections 50-17 and 108-3.12 to provide for accurate location of the markers.

110-3.5 BACKFILLING

ADD: Backfill for duct banks under proposed pavements shall meet the requirements of Section 701-2.7 and 701-3.7.

METHOD OF MEASUREMENT

110-4.3 ADD: The quantity of directional boring to be paid for shall be the number of lineal feet installed, measured in place, completed and accepted. No separate measurements will be made for individual ducts in a multi-way duct system.

110-4.4 ADD: The quantity of In-Pavement Duct Markers to be paid for shall be the number of markers installed, measured in place, completed and accepted.

BASIS OF PAYMENT

110-5.1 ADD:

Payment will be made at the contract unit price per each for In-Pavement Duct Marker.

Payment will be made under:

Item AR110014 - 4" Directional Bore – per linear foot
Item AR110212 - 2" Steel Duct, Direct Bury – per linear foot.
Item AR110504 - 4-Way Concrete Encased Duct – per linear foot
Item AR800293 - Duct Marker–In Pavement – per each.

ITEM 125 – INSTALLATION OF AIRPORT LIGHTING SYSTEMS

DESCRIPTION

125-1.3 DELETE: This Section.

125-1.4 DELETE: This Section.

125-1.5 DELETE: This Section.

ADD:

FAA Advisory Circular AC 150/5340-18 (Latest Edition), Standards for Airport Sign Systems.

125-1.6 DELETE: This Section.

125-1.7 DELETE: This Section.

125-1.8 DELETE: This Section.

125-1.9 ADD:

FAA Advisory Circular AC 150/5340-30B, Design and Installation Details for Airport Visual Aids.

EQUIPMENT AND MATERIALS

125-2.1 GENERAL

REVISE: References of "150/5345-IU" to "150/5345-1 (Latest Edition)".

ADD: Shop drawings and certifications shall be submitted for all components of this section.

The Contractor shall provide a complete itemized listing of equipment and materials proposed for incorporation into the work. Each itemization shall include an item number, the quantity of items proposed, and the name of the manufacturer. Data composed of catalog cuts, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents shall be provided.

Special tools and test equipment required for maintenance and testing of the products shall be supplied by the Contractor.

Instructions necessary to check out, troubleshoot, repair, and replace components of the systems, including integrated electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting after acceptance of the system shall be provided.

125-2.7 ISOLATION TRANSFORMERS

New Isolation Transformers shall be Type L-830 conforming to FAA AC 150/5345-47 sized as required for each installation.

Isolation Transformers for Runway 4/22 shall be 20A. Pri/6.6. A. Sec. All other circuits are 6.6 A. Pri/6.6. A. Sec.

125-2.8 LIGHT CANS

DELETE: This Section.

ADD: Light bases shall meet the requirements of FAA AC 150/5345-42, Type L-867 and L-868, Class 1A (metal), Size (B) and shall be provided as indicated or as required to accommodate the fixture or device installed thereon if diameter is not shown.

All light bases shall be provided with an internal grounding lug.

Light bases shall be pre-cast in concrete where applicable.

Light bases for in-pavement runway edge lights shall be Type L-868, "shallow inset light bases" Class 1A, Size (B), suitable for mounting an FAA L-850C Style 3 inset runway edge with an in-pavement bi-directional snow plow ring. This base shall be approved by FAA for this type of installation.

All new in-pavement light cans shall be installed with two (2) 1/4" adjusting rings or a beveled ring set and gaskets to allow future adjustment.

125-2.10 CABLE CONNECTORS AND SPLICES

ADD: Cable connectors in accordance with FAA AC 150/5345-26, Item L-823 shall be used for connections and splices appropriate for the type of cable. For FAA Type L-824 lighting cable, connectors shall be FAA AC 150/5345-26, Type L-823.

125-2.11 AIRFIELD SIGNS

ADD: The taxiway guidance signs shall meet the requirements of FAA AC 150/5345-44, Type L-858-Y for information, Type L-858-L for location, and Type L-858-R for mandatory signs.

The signs shall be Size 2, Style 2, Class 2 for the taxiway circuits and Style 3 for the Runway 13/31 and Runway 4/22 circuits with the information on the signs as shown in the plans. The power supply to connect to series circuits shall be as approved by the manufacturer.

For the purpose of this specification, a digit shall be defined as a letter, number, space, dot, dash or arrow to be indicated on the sign face.

Airfield guidance signs shall be "low VA".

All signs shall be double faced.

Existing airfield guidance signs are "Lumacurve", L-858, Size 2.

125-2.14 REPLACE SIGN FACES

The existing sign faces shall be modified by removing the existing legend and providing new sign faces with the legend shown in the plans.

The new sign faces shall be provided by the original sign manufacturer. The existing signs are manufactured by "Lumacurve".

The Contractor shall confirm sign make, model, legend and dimensions prior to ordering.

125-2.15 ACCESSORIES

Base plates, cover plates, adapter plates and other required accessories shall be provided to accommodate various sizes of fixtures. Bolts shall be stainless steel.

125-2.16 SEALANT FOR FIXTURES AND WIRES IN DRILLED HOLES OR SAW KERFS

The sealant and embedment material shall be in accordance with FAA AC 150/5370-10, Item P-606, Adhesive Compounds, Two-Component for Sealing Wire and Lights in Pavement. Item P-606 material shall be for use in asphaltic concrete (AC) or Portland cement concrete (PCC) pavement and shall be compatible with AC pavement and have a minimum elongation of 50 percent. Formulations of Item P-606 which are compatible with PCC pavement only are prohibited.

125-2.17 LAMPS AND FILTERS

Lamps shall be of size and type indicated, or as required by the fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors as indicated and conforming to the specification for the light concerned or to the standard referenced.

125-2.18 RUNWAY EDGE LIGHTS

The new runway edge light fixtures shall meet the requirements of FAA AC 150/5345-46, Type L-862 elevated high-intensity and Type L-850-C, Style 3, Class 2, high-intensity inset runway edge light. In-pavement lights shall be initially installed with two (2) 1/4" adjusting rings or a beveled ring set to allow future adjustment.

The replacement in-pavement runway edge light fixtures shall be L-850-C In-Pavement Runway Edge Lights, Style 2 (Crouse Hinds REL-850C1-C) with a new beveled mounting ring suitable for installation on an existing L-868, Size C Light Base.

125-2.19 RUNWAY THRESHOLD AND END LIGHTS

The runway threshold/end light fixtures shall meet the requirements of FAA AC 150/5345-46, Type L-862-E, elevated high-intensity, bi-directional of the color indicated on the plans.

The threshold lights shall use aviation green filter and the end lights shall use aviation red filters. These lights shall be combined in a single bi-directional fixture with the appropriate color filters.

125-2.20 RUNWAY DISTANCE REMAINING SIGNS

Runway distance remaining signs shall conform to FAA AC 150/5345-44, Type L-858-B, Size 4, Style 3, Class 2 with white numerals on a black background. The power supply and lamps shall be as recommended by the sign manufacturer.

All signs shall be double faced.

125-2.21 TAXIWAY EDGE LIGHTS

The taxiway edge lights shall meet the requirements of FAA AC 150/5345-46, Type L-861-T, elevated.

Taxiway edge lights shall be incandescent and emit aviation blue light provided by filters or globes.

125-2.22 IN-PAVEMENT LIGHTING INSTALLATION

Steel snowplow cutting edges will be utilized by the Airport. As a result, in-pavement lighting fixtures shall be constructed and installed to resist damage by steel snow plow cutting edges. This shall be achieved through stronger casting materials, low profile design, protection rings and devices or combination thereof. As a minimum, snow plow protection rings shall be utilized.

Snow plow protection rings shall be Jaquith Industries, Inc., in pavement bi-directional snow plow rings (ductile iron) or approved equal suitable for use with Style 3, L-850-C fixtures.

At the start of the installation of each type of in-pavement lighting, the Contractor shall have available, but not necessarily on site, an experienced and qualified manufacturer's representative or technician to provide guidance and direction in the proper assembly, installation and operation of the in-pavement lighting. As a minimum, the manufacturer's representative shall be available for the start of the following installations:

- In-pavement runway edge lights.

The manufacturer's representative shall remain available until an acceptable installation process is developed. Depending on the Contractor's installation schedule, multiple discussions with the manufacturer's representative may be necessary.

Correct placement and installation of in-pavement lighting is of critical importance, therefore, careful attention to detail is required.

The proposed lighting installation requires surveying that is precise. The installation must be made with utmost care to avoid remedial action which may be very costly for the Contractor.

Prior to final placement, a straightedge of sufficient length shall be used to check vertical installation tolerances and the potential for damage from snow plows.

The Engineer may, upon completion of the lighting installation and as part of the acceptance testing, perform field photometric testing of each new light fixture to assure the installed lights meet the photometric requirements specified by FAA. The test results will be recorded and furnished to the Contractor with any noted deficiencies. Any repairs or remedies to meet the specified requirements shall be at no additional cost to the Owner.

125-2.23 EDGE LIGHT AND GUIDANCE SIGN GROUND RODS

A ground rod and ground wire shall be installed at all new lights and signs as detailed in the plans.

Ground rods shall be 5/8" diameter by 10' long copper clad ground rods

Ground wire shall be a #6 AWG bare stranded copper wire.

The ground rod shall be driven into the ground adjacent to the new light or sign so that the top is a minimum of 18" below the final grade.

Connection of the wire to the ground rod shall be by exothermic weld, Cadweld or approved equal. The other end of the grounding cable shall be securely attached to the light base grounding lug with non-corrosive metal and shall be of substantial construction.

125-2.24 POLYETHYLENE FOAM

Polyethylene foam shall be a strong, resilient, medium or high density closed cell foam suited for vibration dampening, insulation or cushioning. Foam shall be "ETHAFOAM" as manufactured by Dow Chemical Company or approved equal.

The polyethylene foam shall be installed in the shallow inset light bases to fill air voids and reduce the potential for "ice pistons" to form during freezing conditions.

The foam shall be field cut to fill the voids.

CONSTRUCTION METHODS

125-3.4 LIGHT/BASE REMOVAL

Existing light bases shall be completely removed and disposed of by the Contractor off of airport property. The excavations shall be backfilled with earth and compacted to the satisfaction of the Engineer.

Existing fixtures and transformers shall be salvaged and remain the property of the Airport. The material shall be delivered to the Airport Maintenance Facility.

125-3.5 IN-PAVEMENT LIGHTS

The in-pavement lights shall be constructed as shown in the plans. The Contractor shall core and remove the pavement as necessary to install the shallow base and the in-pavement light. The transformer shall be located in a splice can adjacent to the pavement. The secondary(s) for the light shall be routed through conduit then a saw kerf to the proposed light. The void around the light and the saw kerf shall be sealed per the light/cable manufacturers instructions.

Upon completion of the project, the Contractor shall provide the Airport with a "removal tool" for the in-pavement lights if such a tool is required for maintenance.

125-3.6 PAPI/REIL RELOCATION

The Contractor shall remove and relocate the existing 4-box PAPI system and REIL System to the proposed location as detailed in the plans to provide a complete and operational unit at the new location. The Contractor shall restore the existing locations in accordance with Item 152.

The Contractor shall review and document the existing system prior to disassembly.

As part of this Item, the Contractor shall coordinate with the FAA, through the Resident Engineer, the final aiming and acceptance of the relocated PAPI system.

125-3.7 REPLACE IN-PAVEMENT LIGHT

This shall consist of removing the existing L-850-C runway edge light fixtures in the BAK area and replacing with a new L-850-C runway edge light on the existing L-868, Size C Base.

The Contractor shall provide new transformers, gaskets and bolts.

The Contractor shall confirm existing fixture and base dimensions prior to ordering.

125-3.8 REMOVE IN-PAVEMENT LIGHT

This item shall consist of the removal of existing in-pavement fixtures. This work shall include:

- Removal of existing fixture.
- Removal of existing splice can in turf.
- Removal of the conduit transition from the splice can to saw kerf.
- Removal of secondary leads from the pavement saw kerf.
- Seal or fill saw kerf using material meeting the requirements of 125-2.16.
- Removal of the existing transformer.
- Fill the existing shallow base with polyethylene foam.
- Seal to prevent water intrusion.
- Install a new L-868 blank cover of the size required.

125-3.9 ISOLATION TRANSFORMER REPLACEMENT

This item shall consist of the modification of existing guidance signs from one circuit type to another (i.e., 6.6 A PRI./6.6 A Sec. to a 20.0 A Pri./6.6 A Sec.

This work shall include:

- Removal of the existing isolation transformer.
- Installation of a new isolation transformer for the proposed circuit.

Revisions to edge light and signage cabling to accommodate the proposed changes will be paid under Item 108.

METHOD OF MEASUREMENT

125-4.1 DELETE: Entire Section.

ADD: The quantities to be paid for under this item shall consist of:

The quantity of lights, signs, splice cans, sign face replacements, threshold bars, isolation transformer replacements, PAPI relocations, and light ground rods to be paid for under this item shall be the number of new units including associated materials installed as completed units in place ready for operation, and accepted by the Engineer.

The quantity of REIL relocations including associated materials, installed in place as complete pairs, ready for operation and accepted by the Engineer.

The quantity of lights, in-pavement lights, splice cans and signs removed by the Contractor in a satisfactory and workable condition and accepted by the Engineer.

The number of PAPI relocations to be paid for under this item shall be the number of 4-box PAPI systems relocated and installed as a complete unit, ready for operation and accepted by the Engineer.

The number of MALSR threshold bar adjustments to be paid for under this item shall consist of all equipment adjusted, installed, connected, and accepted as a complete unit ready for operation.

BASIS OF PAYMENT

125-5.1 Payment will be made at the contract unit price for each complete light, sign, modification, relocation, removal or adjustment furnished and installed in place or removed by the Contractor and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation, removals, modifications, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item AR125415 – MITL-Base Mounted – per each
Item AR125442 – Taxi Guidance Sign, 2 Character – per each
Item AR125443 – Taxi Guidance Sign, 3 Character – per each
Item AR125444 – Taxi Guidance Sign, 4 Character – per each
Item AR125445 – Taxi Guidance Sign, 5 Character – per each
Item AR125446 – Taxi Guidance Sign, 6 Character – per each
Item AR125515 – HIRL, Base Mounted – per each
Item AR125525 – HIRL, Inpavement – per each
Item AR125550 – HI Threshold Light Base Mtd – per each
Item AR125560 – Runway Distance Remaining Sign – per each
Item AR125565 – Splice Can – per each
Item AR125901 – Remove Stake Mounted Light – per each
Item AR125902 – Remove Base Mounted Light – per each
Item AR125903 – Remove Inpavement Light – per each
Item AR125904 – Remove Taxi Guidance Sign – per each
Item AR125905 – Remove Rwy Distance Remain Sign – per each
Item AR125906 – Remove Splice Can
Item AR125923 – Replace Inpavement Light – per each
Item AR125967 – Relocate REILs – per pair
Item AR125968 – Relocate PAPI – per each
Item AR800294 – Replace Sign Face – per each
Item AR800295 – Runway Threshold Bar – per each
Item AR800296 – Adjust MALSR Threshold Bar – per lump sum
Item AR800297 – Replace Isolation Transformer – per each
Item AR800298 – Light Ground Rod – per each.

ITEM 800833 – PORTABLE CLOSED RUNWAY MARKER

DESCRIPTION

1.1

This item shall consist of providing, maintaining and utilizing a portable lighted closed runway marker as shown in the sequencing operations in the plans or as directed by the Engineer. This item shall be as defined and outlined in these specifications.

The lighted closed runway marker will become property of the Airport and shall be taken to the Airport Maintenance facility at the completion of the project.

MATERIALS

2.1

The runway closure marker and accessories shall be manufactured by Sherwin Industries, Inc. or equal.

The portable runway closure marker must be designed to form a lighted "X" which contains 21 - 90 watt par 38, 10 degree weather proof outdoor standard base clear halogen spot bulbs with one bulb located in the center and five bulbs located in each of the four legs. All "X" panel bulbs, light sockets, wiring and connections must be enclosed in a weather resistant housing. The lighted "X" formed when opened and operating will be 20' 6" each continuous leg and 14' 6" on the peripheral. The marker must collapse for transport and storage so that all parts are inside the trailer from dimensions to prevent damage.

Illuminations of the marker will be workable in a continuous or flashing mode. This must be controlled by a solid state flasher. Mechanical flashers are not acceptable. Flash interval time will be 2.5 seconds on and 2.5 seconds off for both bright and dim modes.

A photocell must be used to reduce the voltage to 75 volts for nighttime operations. A radio interference filter will be installed with an operating frequency of 50 Hz.

The marker must have at least two (2) lights (mounted at the backside of the upper portion of the top of the legs of the X) on the backside of the X to indicate power is being supplied to the marker and to indicate that more than one (1) bulb has become inoperative. The marker must be designed so it can be used while still attached to the tow vehicle or have the means to stand alone. The manufacturer must provide written documentation that the marker will be able to withstand winds of 40 MPH while in operational mode.

A Solar Powered Safety Light will be mounted on the Runway Closure Marker in such a way as to be visible by the tower or airport personnel if for any reason the generator should stop functioning. The light will be capable of flashing both day and night and have sufficient power to last for more than 140 hours.

The runway closure marker must be discernible from a distance of 3 to 5 miles VFR daytime and a minimum of 6 miles VFR nighttime. These distances must be determined from an aircraft using a Loran receiver. Documents substantiating these field tests by an independent third party must accompany specifications.

Set up time for the marker must be capable of being accomplished by one person in two (2) minutes or less. This means the marker can be raised and operating within this time frame. The marker must have the fuel capacity to run at FULL LOAD for a minimum of 120 hours

without refueling. The marker must have the capability of being hard wired for the convenience of operating without the use of a generator for prime power.

All electrical components must be UL listed.

2.2 LIGHTED X SUPPORT FRAME (Angle Mechanism)

The angle mechanism will be constructed of 2" square tubing. The angle mechanism must be capable of tilting 3 degrees from vertical and have trailer adjustments to accommodate this angle no matter what the degree of the runway. The angle mechanism will be operated by an electric actuator which will both raise and lower the mechanism with power from the generator. The actuator must be approved by the manufacture for this application. The actuator must have the following: 3,000 pound (1.361 t) static, capacity, solenoid brake, weather proof, spur gear reduction, 30% Duty cycle motor rating.

2.3 LIGHTED X ASSEMBLY

The marker legs will be constructed from aluminum. A locking system will be installed to secure the legs from expanding when the marker is in the transport mode.

2.4 TRAILER

The trailer frame will be constructed from 2" square tubing. Trailer dimensions: 7'6" wide and 10' long. The trailer floor must be expanded steel to serve as a work platform for servicing personnel and to minimize the possibility of ice and snow accumulation. A 1500# axle with built-in independent Henschen type suspension or equal. Axle springs, shackles, or shock absorbers are not acceptable.

The following shall also be supplied for the trailer:

- A 2" FAS-LOC coupling rated at 3500# GVW with safety chains.
- A two inch (5.08 cm) ball will be mounted at the rear of the trailer to facilitate towing of a second marker.
- Provisions to accommodate safety chains will be mounted at the rear of the trailer.
- D.O.T. approved LED brake, tail, and turn signal lights and reflectors must be provided.
- Five (5) 2000 lb. (0.91 t) jack stands located at each corner and tongue.
- 4.80 X 12" (203.2 X 30.48 cm) tubeless 4-ply tires, 12" (30.48 cm) wheels and fenders.

2.5 PAINT-POWDER COATING

The entire marker unit will be powder coated gloss to a 1.8 mil minimum dry film thickness. Powder to be outdoor rated, UV resistant, polyester TGIC with the following characteristics:

- H-2H Pencil Hardness .. ASTM-D522
- 160 IN-Lb Gardner direct & reverse impact ASTM-D2794 modified
- Flex over 1/4 dia. Needed without fracture

2.6 DIESEL POWERED GENERATOR

The generator shall have the following characteristics:

- Rated Watts - Minimum 3500
- Voltage - 120/240
- Amperage - 29.2/14.6
- Fuel Capacity - 33 Gallons (113.56 l)

- Run Time - 120 hours
- Must comply with Mil Spec. W-F 800 for the use of alternative fuels.
  - CF-1
  - CF-2
  - JET-A
- Starting System - 12V DC Electric & Recoil Rope
- ELECTRICAL OUTLETS:
  - 2-120V (15A) w/ GFI
  - 1-120V (30A) w/ twistlock
  - 1-240V (20A)
- OTHER FEATURES:
  - Low Oil Pressure Safety Protection System
  - Running Time Meter
  - USDA Forestry Approved Muffler
  - Circuit Breaker Protection
  - Anti-Vibration Rubber Mounts
  - Dry Air Cleaner
  - 12V Battery Charging System
  - Operating Range: -40° F to 130° F

*Generator must be approved by the generator manufacture for this application.

2.7 PROTECTIVE COVER

The protective cover shall have the following characteristics:

Total Weight: 18 OZ P.S.Y. Width: 61" Yarn" Polyester County: 20 X 20 Denier: 1000D x 1000D Grab Tensile (FS 5100): 400 x 338 Tongue Tear (FS 5134): 77 x 77 Adhesion (FS 5970): 15 lbs / 2 cm Abrasion (FS 5306): 1000 cycles Low Temperature: -40 degrees Continuous: 180 degrees Intermittent: 200 degrees Finish: Matte Treatments: Anti-mildew, U.V. pigments.
Putup: 75 yards

2.8 WARRANTY

The manufacturer shall warranty the product for a period of one year.

CONSTRUCTION METHODS

3.1

The Contractor will be required to tow/set up the markers to the ends of the runway whenever runway closures are scheduled. The Contractor will also be required to tow/break down the markers back to a location as designated by the Airport. The Contractor will be required to maintain the maker for the duration of this project. Maintenance will include but not limited to; fueling, all scheduled maintenance, replacement of light bulbs etc.

METHOD OF MEASUREMENT

5.1

This item will be measured per each runway closure marker provided. No measurement will be taken for the number of times the marker is towed and set up for runway closures or maintenance.

BASIS OF PAYMENT

6.1

Payment for PORTABLE CLOSED RUNWAY MARKER will be made at the contract unit price per each of which price shall be full compensation for supplying, maintaining and utilizing during runway closures. No additional compensation will be made for the number of times the runway closure markers will be used.

Payment will be made under:

Item AR800833 - Portable Closed Runway Marker - per each.

ITEM 800345 - SURFACE SENSOR SYSTEM UPGRADE

DESCRIPTION

1.1 GENERAL

The contractor shall furnish and install an upgrade package for the existing three Runway Weather Monitoring Systems at Springfield Capital Airport that is specifically designed for monitoring and displaying pavement surface conditions, pavement temperature, freeze point temperature, chemical percentage, subsurface temperature, and atmospheric temperatures and conditions from multiple locations as shown in the contract documents. Springfield Capital Airport has existing pavement surface sensors that provide surface condition including; dry, wet, frost, chemical wet, and snow/ice warning. The existing Springfield Capital Airport system contains atmospheric sensors that collect condition data including; air temperature, relative humidity, and precipitation, dew point, and wind/speed direction. The upgraded hardware and software provided shall be compatible with the existing Springfield Capital airport RWIS system. The system shall include all hardware, software, and licenses to operate seamlessly with the existing system. The Upgrade RWIS package shall perform/support the following tasks/devices:

- Existing FP2000 Runway Pavement surface sensors shall measure pavement surface temperature, chemical concentration, and pavement surface condition inputs and communicate the signals to the Remote Processing Unit (LX RPU).
- Existing Atmospheric sensors shall measure their respective weather parameters and communicate the signals from each to the LX RPU.
- Each LX RPU shall process the output from the sensor(s) and/or atmospherics, store the data temporarily, and send the data to a Network Server (NS) by VHF radio communications media. Data exchanges shall utilize PMPP protocol. All LX RPU equipment shall operate on the Linux operating platform.
- Each LX RPU shall have the capability to collect data from an active surface sensor.
- The NS shall store the data in a standard SQL Server database for access via web browser over the existing Springfield Capital Airport computer network.
- Users shall view the sensor data in a browser-based runway map data display format from any IBM compatible Pentium-class personal computer running Windows 95, Windows 98, Windows NT, Windows XP, or Windows 2000/2003 operating system, and on the existing Airport computer network.

EQUIPMENT AND MATERIALS

2.1 REMOTE PROCESSING UNIT (LX RPU)

The contractor shall supply and install three (3) LX RPU hardware upgrade back-panels for the existing LX RPU locations on the Springfield Capital Airport airfield, which are mounted to existing, freestanding FAA approved structures. The contractor shall also provide install a LX RPU radio, modem, antenna, and cabling at each of the LX RPUs. Each new LX RPU back-panel shall be installed in the existing NEMA Type 4X lockable aluminum enclosure that is resistant to damage by weather and vandals. The LX RPU shall gather data from all connected sensors and remote pavement sensors, and process, store and transmit this data to the NS. LX RPU software shall utilize a Linux based operating system, and be capable of multi-tasking operations to optimize data acquisition from all connected devices. The LX RPU shall gather data from all connected sensors and remote pavement sensors, and process, store and transmit this data to the RWIS server upon polled request.

Each new LX RPU shall be capable of collecting data from the following sensors:

- 1 to 8 Passive surface sensors that are "hardwired"
- 1 to 8 Wireless outpost passive surface sensors
- 1 to 8 Subsurface sensors that are "hardwired"
- 1 to 8 Wireless outpost subsurface sensors
- 1 to 8 Active surface sensor heads that are "hardwired"
- 1 Air temperature/relative humidity sensor
- 1 "Hardwired" mechanical wind speed/direction sensor or 1 heated ultrasonic wind speed/direction sensor
- 1 Wireless mechanical or ultrasonic wind speed/direction sensor
- 1 Weather identifier and visibility sensor or 1 optical weather identifier or 1 yes/no precipitation sensor or tipping bucket rain gauge
- 1 Forward scatter visibility sensor
- 1 Barometric pressure sensor
- 1 Solar radiation sensor
- 1 Water level sensor
- 1 Ultrasonic snow depth sensor
- 1 Ice Camera
- 1 to 2 Pan-Tilt-Zoom low light, color, still frame video cameras or 1 to 2 fixed, zoom, low light color video cameras
- 1 Remote traffic microwave sensor (RTMS)
- 16 Wireless in-pavement permanent traffic count stations.

The three (3) LX RPUs shall be provided with software algorithms for use with the freeze point surface sensors to detect the chemical concentration of the runway anti-icing chemical.

The LX RPU shall incorporate "watch-dog" circuitry and monitor its own operation and reset itself if the LX RPU software enters an indeterminate state. The LX RPU shall have the capability to be reset by a "user administrator" from the NS. The LX RPU shall be capable of remote alignment, reconfiguration, and accepting downloads of updated software from the NS over the same communication link used to collect data from the LX RPU.

The LX RPU design shall maximize the use of solid-state components and modular circuit cards for ease of maintenance. All circuitry of the LX RPU, the voltage inputs, the sensor inputs, and the communications ports shall be designed and tested to provide transient and surge protection. The LX RPU shall provide stable operation over a temperature range of -30°C to 70°C (-40°F to 160°F) and 0-90% RH non-condensing.

2.2 LX RPU TO NETWORK SERVER DATA COMMUNICATIONS

The RWIS communication shall adhere to TCP/IP network protocols. The LX RPU shall communicate with the NS via one CCITT V.24/EIA RS-232C communication interface port on the LX RPU coupled to a modem and VHF radio. The NS shall poll each LX RPU at a time interval specified by the agency to transfer and refresh its data. The radios shall run a licensed frequency provided by the airport. The contractor shall provide and install radios, modems, cables and antennas for the entire system. The Airport will acquire and maintain an FCC licensed radio frequency dedicated to the RWIS system.

2.3 NETWORK SERVER (NS)

The NS shall be a Windows 2000/2003 Operating System Server, which shall collect sensor data from all LX RPUs in the system, then process and store the information in a Microsoft™ SQL Server Relational Database Management System. The Network Server shall be an IBM-compatible Pentium-class Server having sufficient processing power and capacity to meet the following operational requirements.

- Collect all sensor data from a maximum of LX RPUs in the Airport system
- Permit up to 10 Airport users to access the RWIS data simultaneously
- Store historical data from the sensors for one (1) winter season.

The NS shall serve the sensor data to users via a permanent network connection to the existing Airport LAN.

The RWIS Server application shall be 32-bit and employ Microsoft SQL Server Relational database to store RWIS data and allow multiple, simultaneous access to the database for updates from the LX RPUs together with simultaneous user interface access.

The NS and associated peripheral equipment shall operate from 100-128 VAC and shall be operated in an environmentally controlled and secured area.

2.4 NETWORK WEB PAGE DATA DISPLAYS

The vendor shall provide a Server-based Internet Web Page Data Display (IWPDD). The IWPDD shall reside on the Network Server and provide access to RWIS data via the existing Springfield Capital Airport LAN using a widely available "Internet Browser" (Internet Explorer).

IWPDD shall employ the Networking and Database capability of the Network Server with Microsoft's Internet Information Server (IIS), Active Server Pages (ASP), and Hyper Text Transfer Protocol (HTTP). IWPDD shall provide access to timely data from the Network Server over a network or dial-up connection using the computer facilities which, in most cases, are already present on the users Windows based PC or laptop. IWPDD shall only require a Standard Browser (MS Internet Explorer or Netscape), a network or dial-up connection, and TCP/IP or PPP on the user's PC. All software, configuration, and administration shall be handled through the Network Server.

Access and display of current and historical RWIS sensor data, and forecast data resident on the Network Server from the Weather and Site Forecasting Service, shall be available through the IWPDD in a text based format. IWPDD shall display any LX RPU site video images that are resident in the Network Server. The IWPDD shall be capable of displaying NTCIP-ESS data.

The various display pages are described in the following sections.

SUMMARY PAGE

This page must display a one-line summary of current data for each LX RPU in the system. This data includes (depending on LX RPU sensor configuration):

- LX RPU Name
- Representative Surface Sensor Name

- Data Collection Time for the LX RPU
- Surface Status for the LX RPU's representative surface sensor
- Surface Temperature, if available, for the LX RPU's representative surface sensor
- Subsurface Temperature, if available, for the LX RPU's representative subsurface probe
- Air Temperature
- Relative Humidity
- Dew point Temperature
- Precipitation Type
- Precipitation Intensity
- Precipitation Rate
- Visibility Distance
- Wind Gust Speed
- Average Wind Direction

The Summary Page should use color to indicate the Surface Status and Precipitation Type. If left unattended, the Summary Page must refresh every 6 minutes. The Summary Page should link to the Surface Summary Page and each LX RPU's Status Page. The title of each data field must also be a link, which will display the Glossary definition for the field. There may be other links on this page depending on the availability of data such as maps, forecasts, cameras, etc.

SURFACE SUMMARY PAGE

The Surface Summary Page should display current data for each surface sensor in the system grouped by LX RPU. This data includes (depending on the model of surface sensor):

- Surface Sensor Name and number
- Surface Status
- Surface Temperature
- Subsurface Temperature, if available, for the surface sensor
- Freeze Point Temperature
- Chemical Factor
- Chemical Percent
- Solution Depth
- Ice Percent

In addition, the following LX RPU data items should be displayed for each group of surface sensors (depending on LX RPU sensor configuration):

- LX RPU Name
- Data Collection Time for the LX RPU
- Air Temperature
- Dew point Temperature
- Average Wind Speed
- Average Wind Direction
- Precipitation Type

The Surface Summary Page should use color to indicate the Surface Status for each surface sensor. If left unattended, the Surface Summary Page must refresh every 6 minutes. The Surface Summary Page should link to the Summary Page, each LX RPU's Status Page, and each sensor's history page. The title of each data field must also be a

link, which will display the Glossary definition for the field. There may be other links on this page depending on the availability of data such as maps, etc.

LX RPU STATUS PAGE

The LX RPU Status Page should display all current data for a single LX RPU. This data includes (depending on LX RPU sensor configuration):

- LX RPU Name
- Data Collection Time
- Air Temperature
- Relative Humidity
- Dew point Temperature
- Average Wind Speed
- Wind Gust Speed
- Minimum Wind Direction
- Average Wind Direction
- Maximum Wind Direction
- Visibility Distance
- Precipitation Type
- Precipitation Intensity
- Precipitation Accumulation
- Precipitation Rate
- Water Level
- Surface Sensor Name
- Surface Status for each surface sensor
- Surface Temperature for each surface sensor
- Subsurface Temperature, if available, for the surface sensor
- Freeze Point Temperature
- Chemical Factor
- Chemical Percent
- Solution Depth
- Ice Percent

The LX RPU Status page should use color to indicate Surface Status and Precipitation Type. If left unattended, the LX RPU Status Page must refresh every 6 minutes. This LX RPU Status Page should link to the Summary Page and the History Page for the representative sensor. The title of each data field must also be a link, which will display the Glossary definition for the field. There may be other links on this page depending on the availability of data such as maps, forecasts, cameras, etc.

HISTORY PAGE

The History Page should display 8 hours of temperature, wind, and precipitation history data for a single LX RPU ordered most recent to least recent. The History Page must include (depending on LX RPU sensor configuration):

- LX RPU Name
- History Time Period
- Data Collection Time for each history data snapshot
- Surface Temperature for the LX RPU's representative surface sensor
- Subsurface Temperature, if available, for the LX RPU's representative surface sensor
- Air Temperature

- Relative Humidity
- Dew point Temperature
- Average Wind Speed
- Wind Gust Speed
- Average Wind Direction
- Precipitation Type
- Precipitation Intensity

The History Page should use color to indicate the Precipitation Type. The History Page links to the Summary Page, the Surface Summary Page, the LX RPU Status Page, and the History Graph page. The History Page must include links to access the previous or next 8 hours of history data. Using these links, you should be able to navigate back through any history data available for an LX RPU. The title of each data field must also be a link, which will display the Glossary definition for the field. The data currently displayed on the History page must be linked to the data displayed on the Precipitation/Surface History Page.

SURFACE HISTORY PAGE

The Surface History Page should display 8 hours of surface status, surface temperature, and precipitation history data for a single LX RPU ordered most-recent to least-recent. The Precipitation/Surface History Page includes (depending on LX RPU sensor configuration and surface sensor model):

- LX RPU Name
- History Time Period
- Data Collection Time for each history data snapshot
- Surface Status for the LX RPU's representative surface sensor
- Surface Temperature for the LX RPU's representative surface sensor
- Subsurface Temperature, if available, for the LX RPU's representative surface sensor
- Freeze Point Temperature for the LX RPU's representative surface sensor
- Chemical Factor for the LX RPU's representative surface sensor
- Chemical Percent for the LX RPU's representative surface sensor
- Solution Depth for the LX RPU's representative surface sensor
- Ice Percent for the LX RPU's representative surface sensor
- Precipitation Type
- Precipitation Intensity
- Precipitation Accumulation
- Precipitation Rate

The Surface History Page should use color to indicate the Surface Status and Precipitation. The Surface History Page must link to the Summary Page, the LX RPU Status Page, the History page, and the History Graph page. The Surface History Page should include links to access the previous or next 8 hours of history data. Using these links, you should be able to navigate back through any history data available for an LX RPU. The title of each data field is also a link, which will display the Glossary definition for the field.

HISTORY GRAPH PAGE

The History Graph should present a line graph representation of historical temperature data for a single LX RPU. The data displayed on the graph includes:

- Surface Temperature for each sensor
- Freeze Temperature for each sensor
- Air Temperature
- Dew point Temperature

The Options section at the bottom of the History graph should allows you to customize the display of data according to your needs. Each customization option should be available as described below.

Chart Scale: The End Date and the Time Period determine the chart scale. Enter the date and time in *dd mon yyyy hh:mm* format. The date should be the end of the range of history data you are interested in viewing. When the graph is initially displayed, the current date and time is displayed in this field. The Time Period you select determines how many hours of data previous to the End Date are displayed in the graph.

Chart Selections: The Chart Selections determine the lines, which are displayed on the graph. There are 4 types of lines that can be displayed. They are:

- Air Temp – If selected, the Air temperature history line is displayed (default).
- Dew Temp – If selected, the Dew point temperature history line is displayed.
- Surface Temp – If selected, a surface temperature history line is displayed for each sensor that is selected (default).
- Freeze Temp – If selected, a freeze temperature history line is displayed for each sensor that is selected.

The name and number of each sensor for the current LX RPU is displayed along with a checkbox. Select the sensor or sensors you want displayed on the graph. When the graph is initially displayed, the representative sensor is selected as the default.

Legends: This checkbox should allow you to determine whether the Precipitation Type & Intensity legend and the Surface Status legend are displayed. The box is checked by default. To remove the legends, uncheck the box.

GLOSSARY PAGE

In addition to the RWIS data pages, a Glossary display page shall be included which defines each of the data items displayed and other important terms. Every Web page must provide links to the Glossary Page to provide convenient access to on-line help.

RUNWAY MAP PAGE

The server shall provide all users with a runway map display page for displaying system data graphically. The runway map will have all three LX RPU sites as well as all the sensors associated with the LX RPUs. Click on an LX RPU site noted on the map to display the current atmospheric data for the LX RPU. Click on a sensor site to display current data for the sensor. Sensors are color-coded based on its surface status. The runway map displays each LX RPU associated with a data tag. Only one data item can be displayed on a tag at any time. The same data item is displayed for each LX RPU on the map. By default, the air temperature is displayed. The default data item to be displayed on all maps during the current browser session can be configured on the Map Options page.

CONSTRUCTION METHODS

3.1 SYSTEM COMMISSIONING

After contractor completion of the equipment installation, the equipment vendor shall perform all final system checks, sensor alignments, software setup, and software configuration to provide a fully operational RWIS.

3.2 EQUIPMENT WARRANTY

After contract acceptance, the equipment vendor shall provide a limited, on-site, warranty coverage on all equipment for a 12-month period from the system commissioning date. A copy of the vendor's warranty documentation shall be submitted to the Airport after contract award. Additionally, the vendor for the in-pavement sensors will provide a limited lifetime warranty.

3.3 SYSTEM USER TRAINING

The equipment vendor shall provide an on-line computer based training tutorial with the system, which provides training on the operation web browser accessed user software. The equipment vendor shall also provide 4 hours of on-site system user training to Springfield Capital Airport personnel at a mutually agreeable time at the base. Training will cover basic operation of the system and how to use the system information in agency operations. The vendor shall provide 5 sets of training manuals, which detail the configuration and operation of the system.

3.4 EQUIPMENT SUMMARY

NOTE: The following summary is provided for information only and may differ from equipment provided by equipment vendor. The Contractor shall coordinate this equipment summary with the equipment vendor.

All RWIS equipment furnished on this project shall be state of the art and in current manufacture at the time of purchase. Arrangements to purchase the system from the equipment vendor can be obtained by contacting Surface Systems, Inc. at 314-569-1002. The instruments and data processing equipment to be supplied are as follows:

	SCAN LX RPU AND SOFTWARE	**Part Number**
3	**Linux LX RPU Upgrade for STD Size Enclosure, 30x24x12 (110VAC)** Includes full size card rack, interface card, system boards and LX RPU back plate	**70030200**
3	**LX RPU Software License**	**80301100**
	NTCIP-ESS Communications Protocol	**00000032**
	SSBP Communications Protocol	
	SP Communications Protocol	
	Chemical Algorithm for Sodium Chloride (NaCl)	**80301100**
	Chemical Algorithm for Potassium Acetate (KAc) E36	**80301102**
	Chemical Algorithm for Magnesium Chloride (MgCl)	**80301103**
	Chemical Algorithm for Sodium Acetate (NaAc)	

	Chemical Algorithm for Magic/M50	
	Chemical Algorithm for Calcium Magnesium Acetate (CMA)	**80301105**
	Chemical Algorithm for Calcium Chloride (CaCL2)	**80301106**
	Chemical Algorithm for Cal Ban 70 (CB70)	**00000070**
3	**ESP-LX RPU Surface Sensor Expansion Kit**	**70120040**
	LX RPU hardware & software to support SECOND 4 Surface Sensors	
	ESP Termination Board	70109505
	ESP A/D Board	70109500
	Termination Board Daisy Chain Cable	50501332
	ESP A/D to Termination Cable	50501331
	Spacer for Boards (4)	18020848
	Lockwashers, Split (4)	19220804

SCAN SERVERS AND SOFTWARE

1	**SCAN Web Server, Gateway**	**51016233**
	Xeon 2.4GHz, 512K L2 Cache and 533Mhz FSB, 512MB PC2100 DDR SDRAM, 2-36GB Mirrored Ultra 320 SCSI SCA 10K RPM HDD's, 1.44MB FDD, 48X max. CD ROM, 10/20GB IDE TR5 TBU w/Tape, Keyboard, Mouse, APC UPS, Integrated Intel PCI 10/100/1000 10 Base-T NIC, 56K external modem for service access. SSI products supported on this platform: SCAN for Windows, SCAN Sentry, SCAN Web	
	Monitor not included	
1	**17" SVGA Color Monitor**	**54010150**
1	**Digiboard - NEO PCI 4 Port Expansion Board for Server**	**51020109**
	Includes cable	
1	**SCAN Web Server Setup and Configuration.**	**85001001**
	SSI Furnished Server	
	Software load and testing - Purchased and shipped from SSI	
1	**Microsoft Windows 2000 Server License Pack**	**51052000**
	NOTE: CUSTOMER MUST BE AT SCAN WEB 4.0 OR HIGHER	
	Not required if customer has a site license from Microsoft for Microsoft Windows 2000 license Pack	
1	**Microsoft SQL 2000 Server x.x License Pack (current version)**	**51056002**
	This version of Windows 2000 SQL is for 5 Client Access Licenses (CAL's). If a customer requires more than 5 licenses, pricing must be adjusted accordingly. Please consult with the Engineering Department.	
	NOTE: CUSTOMER MUST BE AT SCAN WEB 4.0 OR HIGHER	
	Not required if customer has a site license from Microsoft for Microsoft SQL 2000 Server license Pack.	
1	**SCAN Server Data Collection Software & Media**	**00000063**
	Required for all SCAN Web Servers with Disaster Recovery	

	Includes SCAN Server NTCIP-ESS Software License	**00000033**
1	**SCAN Web Airport Software (Current Version)** This is a one time fee per Airport server that provides the software and Non-Redistribution License for a Single User (Agency)'s SCAN Web Server. Provided with Site Map. Additional map types may be purchased. Chart Works OEM License Scan Web Version 4.0	**80000082** 00000340 51053521
1	**Single LX RPU Site Custom Site Map for Airport** (SSI generated site depiction drawing with LX RPU site data) No charge to an Airport with the initial purchase of Scan Web	**00000319**

SERVER COMMUNICATION

2	**USR 56K Server Modem**	**58030256**
1	**VHF Airport LX RPU DataRadio Kit** Cable: Coax, 4' SMA-Female to N-Male Integrated Wireless Modem, VHF 132-17 Mhz, 6.25Khz Bandwith, 1-5 Watts Cable: DB9S to BB9P Straight Thru, 3 ft. Polyphaser, DC Pass Protector, N-Female to N-Female Astron 7A, Power Supply Cable: Coax, 12" N-Males to N-Male, 50 Ohm, 9913	**24051880** 50501368 52070030 50501358 49030213 28010001 50932112
1	**HUSTLER G7-150-3, 161-167 MHz, VHF**	**61050002**
1	**COAX CABLE 100'**	**50932000**

LX RPU COMMUNICATION

3	**VHF Airport LX RPU DataRadio Kit** Cable: Coax, 4' SMA-Female to N-Male Integrated Wireless Modem, VHF 132-17 Mhz, 6.25Khz Bandwith, 1-5 Watts Cable: DB9S to BB9P Straight Thru, 3 ft. Polyphaser, DC Pass Protector, N-Female to N-Female Astron 7A, Power Supply Cable: Coax, 12" N-Males to N-Male, 50 Ohm, 9913	**24051880** 50501368 52070030 50501358 49030213 28010001 50932112
3	**Antenna, Yagi, 138-174MHZ, 3- Element, 7 DB** ***(select one)***	**61010001**
3	**COAX CABLE 12'(Airports)**	**50932012**

SERVICE / PREVENTATIVE MAINTENANCE CONTRACTS & ENGINEERING

1	**Commissioning by Field Service Engineer - Systems** Commissioning is performed by SSI Service Technician on site after installation has been completed. It is the process that brings the installed RWIS equipment into a fully operational condition. The SSI Technician will calibrate and terminate the pavement sensor cables. The completion of commissioning signifies the start of warranty period.	**80602100**

MANUALS / TRAINING SERVICES

1	**SCAN Sentry User Manual**	**00001109**
1	**System User Training, 4 Hour Session, On Site**	**80600750**

BASIS OF PAYMENT

5.1 Payment will be made under:

Item AR800345 – Surface Sensor System Upgrade –per lump sum

APPENDIX 1

Policy Memorandum 96-2
Requirements for Laboratory, Testing, Quality Control
& Paving of Bituminous Concrete Mixtures
January 15, 2007
20 Pages

State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

January 15, 2007	Springfield, Illinois	Number 96-2

TO: CONTRACTORS

SUBJECT: REQUIREMENTS FOR LABORATORY, TESTING, QUALITY CONTROL, AND PAVING OF BITUMINOUS CONCRETE MIXTURES

I. SCOPE

The purpose of this policy memorandum is to define to the Contractor the requirements concerning the laboratory, testing, Quality Control, and paving of bituminous concrete mixtures. References are made to the most recent issue of the Standard Specifications for Construction of Airports and to American Society for Testing and Materials (ASTM) testing methods. The Quality Assurance and acceptance responsibilities of the Engineer are described in Policy Memorandum 96-3.

II. LABORATORY

The Contractor shall provide a laboratory located at the plant and approved by the Illinois Division of Aeronautics (IDA). The laboratory shall be of sufficient size and be furnished with the necessary equipment and supplies for adequately and safely performing the Contractor's Quality Control testing as well as the Engineer's acceptance testing as described in Policy Memorandum 96-3.

The effective working area of the laboratory shall be a minimum of 600 square feet with a ceiling height of not less than 7.5 feet. Lighting shall be adequate to illuminate all working areas. It shall be equipped with heating and air conditioning units to maintain a temperature of 70° F ± 5° F.

The laboratory shall have equipment that is in good working order and that meets the requirements set forth in the following ASTM test standards:

ASTM C 117	Test Method for Materials Finer than 75 µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM C 566	Total Moisture Content of Aggregate by Drying
ASTM D 75	Sampling Aggregates
ASTM D 1559	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
ASTM D 2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
IDOT	Ignition Method for Determining Asphalt Content

ASTM D 2726	Bulk Specific Gravity of Compacted Bituminous Mixtures using Saturated Surface Dry Specimens
ASTM D 3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D 2950	Density of Bituminous Concrete in Place by Nuclear Method
ASTM D 4125	Asphalt Content of Bituminous Mixtures by Nuclear Method
ASTM C 127	Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate
ASTM C 128	Standard Test Method for Specific Gravity and Absorption of Fine Aggregate

The Asphalt Institute's *Mix Design Methods for Asphalt Concrete Manual No. 2 (MS-2)*

The laboratory and equipment furnished by the Contractor shall be properly calibrated and maintained. The Contractor shall maintain a record of calibration results at the laboratory. The Engineer may inspect measuring and testing devices at any time to confirm both calibration and condition. If the Resident Engineer determines that the equipment is not within the limits of dimensions or calibration described in the appropriate test method, the Engineer may stop production until corrective action is taken. If laboratory equipment becomes inoperable or insufficient to keep up with mix production testing, the Contractor shall cease mix production until adequate and/or sufficient equipment is provided.

III. MIX DESIGN SUBMITTAL

Based upon data and test results submitted by the Contractor, the Illinois Division of Aeronautics Engineer of Construction & Materials shall issue the final Job Mix Formula approval letter that concurs or rejects the Contractor's proposed JMF. The Contractor will be required to perform the sampling and laboratory testing and develop a complete mix design, according to the following guidelines: [Note: A testing summary chart can be found in Appendix B.]

A. Material sources meeting the requirements of the contract shall be submitted in writing at or before the preconstruction conference (see BITUMINOUS WORKSHEET in Appendix A) in the following format:

1. To: Steve Long, Acting Chief Engineer
   Attn: Mike Wilhelm, Engineer of Construction & Materials
   Division of Aeronautics
   One Langhorne Bond Drive
   Springfield, Illinois 62707

2. Producer name and location of each aggregate

3. Producer # for each aggregate (producers are assigned this number by IDOT Central Bureau of Materials)

4. Material code for each aggregate

5. Gradation and Quality designation for each aggregate (i.e. CA-11, etc.)

6. Producer, producer #, and specific gravities of asphalt cement

7. Performance Graded Binder 64-22 shall be used unless otherwise approved by the IDA Engineer of Materials.

B. The Contractor shall obtain representative samples of each aggregate. The individual obtaining samples shall have successfully completed the IDOT Aggregate Technician Course under the IDOT Division of Highways, QC/QA program. The sample size shall be approximately 280 lb. for each coarse aggregate, 150 lb. for each fine aggregate, 15 lb. for the mineral filler or collected dust, and 1 gallon of asphalt cement.

C. The Contractor shall split the aggregate samples down and run gradation tests according to the testing methods referenced in Appendix B of this memorandum. The remaining aggregates shall be set aside for further Mix Design testing. The results of the gradation tests, along with the most recent stockpile gradations, shall be reported by fax to the IDA Engineer of Materials for engineering evaluation. If the gradation results are deemed non-representative or in any way unacceptable, new representative samples may be required at the direction of the IDA Engineer of Materials. Only composite gradations are required under this procedure.

D. Based on the accepted gradation results, the Contractor will determine blend percentages in accordance with the contract specifications (see Section 201/401 – 3.2 JOB MIX FORMULA under Table 4) for each aggregate to be used in determining the Job Mix Formula, as well as mix temperature and asphalt content(s), and number of Marshall Blows for preparation of the Marshall Mix Design, or number of gyrations for Superpave Mix Design, depending on which design method is specified in the contract. The Contractor will verify the aggregate percentages, mix temperatures, asphalt content(s), and number of Marshall blows (or gyrations) with the IDA Engineer of Construction & Materials before beginning any testing.

E. After verification of the information from step D., the Contractor shall make specimens and perform the following tests at various asphalt contents in order to obtain the optimum mix design. [Note: Actual test designation is referenced in Appendix B of this memorandum.]

Marshall Tests
Maximum Specific Gravity -- "G_{mm}"
Bulk Specific Gravity -- "G_{sb}"
Marshall Stability
Marshall Flow
% air voids

The JMF will be designed in accordance with Table 4 as modified in the Recurring Special Provisions for the type of mix being produced. Appendix C contains a copy of the Table 4 targets and ranges for the JMF.

F. All technicians who will be performing mix design testing and plant sampling/testing shall have successfully completed the IDOT Division of Highways Bituminous Concrete Level 1 Technician Course "Bituminous Concrete Testing". The Contractor may also provide a Gradation Technician who has successfully completed the Department's "Gradation Technician Course" to run gradation tests only under the supervision of a Bituminous Concrete Level 2 Technician.

G. The mix design testing results and resulting optimal JMF shall be reported to the IDA Engineer of Construction & Materials with the following data included:

a) Aggregate & liquid asphalt material codes
b) Aggregate & liquid asphalt producer numbers, names, and locations
c) Aggregate Blend of each aggregate
d) Optimum Blend % for each sieve
e) AC Specific Gravity
f) Bulk Specific Gravity and Absorption for each aggregate
g) Summary of Marshall Design Data: AC % Mix, Stability, Flow, G_{mb}, G_{mm}, VMA, Voids (Total Mix), Voids Filled

h) Optimum design data listing AC % Mix, Stability, Flow, G_{mb}, G_{mm}, VMA, Voids (Total Mix), Voids Filled
i) Percent of asphalt that any RAP will add to the mix
j) Graphs for the following: gradation on 0.45 Power Curve, AC vs. Voids (Total Mix), AC vs. Specific Gravities, AC vs. Voids Filled, AC vs. Stability, AC vs. Flow and VMA

H. The IDA Engineer of Construction & Materials shall generate and issue a concurrence or rejection of the Contractor's proposed Mix Design with the JMF for the manufacture of bituminous mixtures based upon the Contractor's submitted testing and complete mix design results. The Contractor shall not be permitted to use the proposed HMA mix in production for the project until this concurrence letter is issued to the Contractor by the IDA Engineer of Construction & Materials, and the mix passes all test section requirements, when a test section is specified.

I. The above procedure, III. MIX DESIGN SUBMITTAL shall be repeated for each change in source or gradation of materials.

IV. MIX PRODUCTION TESTING

The Quality Control of the manufacture and placement of bituminous mixtures is the responsibility of the Contractor. The Contractor shall perform or have performed the inspection and tests required to assure conformance to contract requirements. Quality Control includes the recognition of defects and their immediate correction. This may require increased testing, communication of test results to the plant or the job site, modification of operations, suspension of bituminous mix production, rejection of material, or other actions as appropriate. The Resident Engineer shall be immediately notified of any failing tests and subsequent remedial action. Form AER M-14 shall be reported to the Engineer and Resident Engineer no later than the start of the next work day. In addition, AER M-9 and M-11 shall be given to the Resident Engineer daily (Appendix A). The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for Quality Control. This individual shall have successfully completed the IDOT Division of Highways Bituminous Concrete Level II Technician Course "Bituminous Concrete Proportioning and Mixture Evaluation." In addition to the QC Manager, the Contractor shall provide sufficient and qualified personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. The following plant tests and documentation shall be required: [Note: A summary chart of testing can be found in Appendix B.]

A. Minimum of one (1) complete hot bin or combined belt analysis per day of production or every 1,000 tons, whichever is more frequent.

B. Minimum one (1) stockpile gradation for each aggregate and/or mineral filler per week when a batch plant is utilized. Minimum of one (1) gradation for each aggregate per day of production or every 1,000 tons when a drum plant is used, and one (1) gradation per week for mineral filler when a drum plant is used.

C. A certification from the quarry for the total quantity of aggregate listing the source, gradation type, and quality designation of aggregate shipped.

D. Original asphalt shipping tickets listing the source and type of asphalt shipped.

E. One mix sample per 1,000 tons of mix. The sample shall be split in half. One half shall be reserved for testing by the Engineer. The other half shall be split and tested by the Contractor for Marshall, Extraction, Gradation, Maximum Specific Gravity, and Air Void tests in accordance with the appropriate ASTM standard referenced herein. [See Appendix B.]

1. In place of the extraction test, the Contractor may provide the asphalt content by a calibrated ignition oven test using the IDOT Division of Highways' latest procedure. The correction (calibration) factor for aggregate type shall be clearly indicated in the reported test results.

From these tests, the Contractor shall interpret the test data and make necessary adjustments to the production process in order to comply with the approved JMF.

V. QUALITY CONTROL

A. Control Limits

Target values shall be determined from the approved JMF. The target values shall be plotted on the control charts within the following control limits:

	Control Limits	
Parameter	Individual Test	Moving Avg. of 4
% Passing		
1/2 in.	± 7 %	± 4 %
No. 4	± 7 %	± 4 %
No. 8	± 5 %	± 3 %
No. 30	± 4 %	± 2.5 %
No. 200 *	± 2.0 % *	± 1.0 % *
Asphalt Content	± 0.45 %	± 0.2 %

* No. 200 material percents shall be based on washed samples. Dry sieve gradations (-200) shall be adjusted based on anticipated degradation in the mixing process.

B. Control Charts

Standardized control charts shall be maintained by the Contractor at the field laboratory. The control charts shall be displayed and be accessible at the field laboratory at all times for review by the Engineer. The individual required test results obtained by the Contractor shall be recorded on the control chart immediately upon completion of a test, but no later than 24 hours after sampling. Only the required plant tests and resamples shall be recorded on the control chart. Any additional testing of check samples may be used for controlling the Contractor's processes, but shall be documented in the plant diary.

The results of assurance tests performed by the Engineer will be posted as soon as available.

The following parameters shall be recorded on control charts:

1. Combined Gradation of Hot-Bin or Combined Belt Aggregate Samples (Drier Drum). (% Passing 1/2 in., No. 4., No. 8, No. 30, and No. 200 Sieves)

2. Asphalt Content

3. Bulk Specific Gravity of Marshall Sample

4. Maximum Specific Gravity of Mixture

C. Corrective Action for Required Plant Tests

Control Limits for each required parameter, both individual tests and the average of four tests, shall be exhibited on control charts. Test results shall be posted within the time limits previously outlined.

1. Individual Test Result. When an individual test result exceeds its control limit, the Contractor shall immediately resample and retest. If at the end of the day no material remains from which to resample, the first sample taken the following day shall serve as the resample as well as the first sample of the day. This result shall be recorded as a retest. If the retest passes, the Contractor may continue the required plant test frequency. Additional check samples should be taken to verify mix compliance.

2. Asphalt Content. If the retest for asphalt content exceeds control limits, mix production shall cease and immediate corrective action shall be instituted by the Contractor. After corrective action, mix production shall be restarted, the mix production shall be stabilized, and the Contractor shall immediately resample and retest. Mix production may continue when approved by the Engineer. The corrective action shall be documented.

   Inability to control mix production is cause for the Engineer to stop the operation until the Contractor completes the investigation identifying the problems causing failing test results.

3. Combined Aggregate/Hot-Bin. For combined aggregate/hot-bin retest failures, immediate corrective action shall be instituted by the Contractor. After corrective action, the Contractor shall immediately resample and retest. The corrective action shall be documented.

   a. Moving Average. When the moving average values trend toward the moving average control limits, the Contractor shall take corrective action and increase the sampling and testing frequency. The corrective action shall be documented.

      The Contractor shall notify the Engineer whenever the moving average values exceed the moving average control limits. If two consecutive moving average values fall outside the moving average control limits, the Contractor shall cease operations. Corrective action shall be immediately instituted by the Contractor. Operations shall not be reinstated without the approval of the Engineer. Failure to cease operations shall subject all subsequently produced material to be considered unacceptable.

   b. Mix Production Control. If the Contractor is not controlling the production process and is making no effort to take corrective action, the operation shall stop.

VI. TEST SECTION AND DENSITY ACCEPTANCE **(Note: Applies only when specified.)**

A. The purpose of the test section is to determine if the mix is acceptable and can be compacted to a consistent passing density.

A quick way to determine the compactibility of the mix is by the use of a nuclear density gauge in the construction of a growth curve. An easy way to construct a growth curve is to use a good vibratory roller. To construct the curve, an area the width of the roller in the middle of the mat is chosen and the roller is allowed to make one compactive pass. With the roller stopped some 30 feet away, a nuclear reading is taken and the outline of the gauge is marked on the pavement. The roller then makes a compaction pass in the opposite direction and another reading is taken. This scenario is continued until at least two (2) passes are made past the maximum density obtained.

The maximum laboratory density potential of a given mix is a direct function of the mix design air voids. Whereas, the actual maximum field density is a function of the type of coarse aggregates, natural or manufactured sands, lift thickness, roller type (static or vibratory), roller and paver speed, base condition, mix variation, etc. All of these items are taken into consideration with the growth curve.

1. High Density in the Growth Curve. If the growth curve indicates a maximum achievable field density of between 95 to 98 percent of the Theoretical Maximum Density (D), you can proceed with the Rolling Pattern. On the other hand, if the maximum achievable density is greater than 98 percent, a quick evaluation (by use of an extractor, hot bin gradations, nuclear asphalt determinator, etc.) must be made of the mix. When adjustments are made in the mix, a new growth curve shall be constructed.

2. Low Density in the Growth Curve. If the growth curve indicates the maximum achievable density is below 94 percent, a thorough evaluation of the mix, rollers, and laydown operations should be made. After a thorough evaluation of all factors (mix, rollers, etc.), asphalt or gradation changes may be in order as directed by the Engineer. Again, any changes in the mix will require a new growth curve. Note that the nuclear density test is a quality control tool and not an acceptance test. All acceptance testing is to be conducted by the use of cores, unless otherwise specified.

3. Acceptance of Test Section. The Contractor may proceed with paving the day after the test section provided the following criteria have been met:

    a. Four random locations (2 cores per location cut longitudinally and cored by the Contractor) will be selected by the Engineer within the test strip. No individual core can be below a minimum of 94% density.

    b. All Marshall and extraction test results from mix produced for the test section must be within the tolerances required by specification.

    c. The Contractor shall correlate his nuclear gauge to the cores taken in the test section. Additional cores may be taken at the Contractor's expense for this purpose within the test section area, when approved by the Engineer.

4. Density Acceptance under Production Paving. The responsibility for obtaining the specified density lies with the Contractor. Therefore, it is important that the nuclear density gauge operator communicate with the roller operators to maintain the specified density requirements. The Contractor shall provide a Bituminous Concrete Density Tester who has successfully completed the Department's "Bituminous Concrete Nuclear Density Testing Course" to run all required density tests on the job site. Density acceptance testing, unless otherwise specified, is described as follows:

    a. The Contractor shall cut cores at random locations within 500 ton sublots as directed by the Resident Engineer.

    b. The cores should be extracted so as not to damage them, since they are used to calculate the Contractor's pay.

    c. The Engineer will run preliminary G_{mb} tests on the cores to give the Contractor an indication of how compaction is running for the next day's paving.

d. A running average of four (4) Maximum Theoretical Gravities (G_{mm}) will be used for calculating percent compaction.

e. Final core density tests and pay calculations will be performed by the Resident Engineer and delivered to the Contractor.

Steven J. Long, P.E.
Acting Chief Engineer

Supersedes Policy Memorandum 96-2 dated April 1, 2004

APPENDIX A

BITUMINOUS WORKSHEET

Airport: _____ Project No.: _____ AIP No.: _____

Mix Design # : _____ Material Code: _____ Producer: _____
Prod. #: _____

AGGREGATE

Mat'l. Code: _____ _____ _____ _____ _____

Producer #: _____ _____ _____ _____ _____

Prod. Name _____ _____ _____ _____ _____

Location: _____ _____ _____ _____ _____

Percent Passing

Sieve Size					
1 inch					
3/4 inch					
½ inch					
3/8 inch					
No. 4					
No. 8					
No. 16					
No. 30					
No. 50					
No. 100					
No. 200					
Washed (y/n)					
O.D. Gravity					
App. Gravity					
Absorption					

Asphalt Gravity_____Asphalt Source_____Asphalt Producer No._____

MARSHALL DATA

% Asphalt					
M. Stability					
Flow					
D					
0					
% Air Voids					

Q.C. Manager Name: _____ Phone number: _____

Laboratory Location: _____ Fax Number: _____

Remarks: _____

Bituminous Mixture Daily Plant Output

Date: _____
Airport: _____
Ill. Project: _____
AIP Project _____
Consultant: _____
Contractor: _____
Producer _____

Tons/Hr.	Batch Wt.	Batches	Loads	Tons	Mix No.
AC Prod.	Material	% Mix	Add Prod	Material	% AC
Temp. (F)	Agg Drier	Agg Bin	Asphalt	Bit. Mix	Bit. Mix
Max					(RE/RT)
Min					
Wtd. Avg.					

Mix Time	Dry	Wet	Total	Plant Oper.	Start	Stop	Delays	Hrs
Contract		Job No.	Qnty	Contract		Job No.	Qnty.	

Remarks _____

Bin		RAP	Bin 5	Bin 4	Bin 3	Bin 2	Bin 1	M.F.	New Bit	Wash	Changed
Mix %											
Lb/Bt-Rev										Mix	Spec
Agg %									% Pass	Form	Range
1.5	Wt %										
	% Bin										
1	Wt %										
	% Bin										
3/4	Wt %										
	% Bin										
1/2	Wt %										
	% Bin										
3/8	Wt %										
	% Bin										
4	Wt %										
	% Bin										
8	Wt %										
	% Bin										
16	Wt %										
	% Bin										
30	Wt %										
	% Bin										
50	Wt %										
	% Bin										
100	Wt %										
	% Bin										
200	Wt %										
	% Bin										
Bit.											

AC - Prod	Ac-Code	Ticket	Date	Qnty	AC-Prod	AC-Code	Ticket	Date	Qnty	

Bituminous Mixtures Extraction

Date: _____

Airport: _____ Consultant: _____

Illinois Project: _____ Contractor: _____

AIP Project No.: _____ Producer: _____

Mix #: _____ Dry Time: _____ Lot: _____ Sublot: _____

Type: _____ Washed: _____

Sieve	Wt.	Accum. Wt.	% Passing	Mix Formula	Tolerance	Spec Range
1.5						
1						
3/4						
1/2						
3/8						
4						
8						
16						
30						
50						
100						
200						
Tot Agg						
Bit						

Extraction Data			
Pan, New Filter & Sample		g	_____
Pan & New Filter		g	_____
Sample		g	_____
Pan, Used Filter	Aggregate	g	_____
Pan & New Filter		g	_____
Aggregate		g	_____
Pan & Used Filter		g	_____
Pan & New Filter		g	_____
Dust in Filter		g	_____
Sample		g	_____
Aggregate		g	_____
Bitumen		g	_____

New Bit:	Marshall Stab:	Blows:	Gyro:	Flow:	TSR:
Bulk SPGR:	Max SPGR:	% Voids:	DEN (PCF):		

Remarks: _____

CC: _____ Tested by: _____

AERM-11

Bituminous Testing Summary

Project: ______________ Illinois Project: ______________ Airport: ______________

AIP Proj.: ______________ Mix Design No.: ______________ Contractor: ______________

Producer: ______________ Remarks: ____

Extraction Data

Marshall Data

Date	Lot/	Sieve	1"	3/4"	1/2"	3/8"	#4	#8	#16	#30	#50	#100	#200	% AC	Stab.	Flow	d'	D'	Voids
Placed	Sublot	JMF																	
	Test Section																		

APPENDIX B

QUALITY CONTROL TESTING (PLANT)				
PARAMETER	**FREQUENCY**	**SAMPLE SIZE**	**TEST METHOD**	**REPORT FORM**
Aggregate Gradations-Hot bins for batch and continuous plants—Individual cold-feeds or combined belt-feeds for drier-drum plants	Minimum 1 per day of production and at least 1 per 1000 tons	CA07/11-5000 gm CA13-2000 gm CA16-1500 gm Fine agg-500 gm 1 gallon asphalt cement	ASTM C136	AERM-9
Aggregate gradations-Stockpiles	Minimum 1 per aggregate per week per stockpile	CA07/11-5000 gm CA13-2000 gm CA16-1500 gm Fine agg-500 gm *Note: The above test sample sizes are to be obtained from splitting down a larger sample from the stockpiles	ASTM C136	AERM-9
Maximum Specific Gravity	Minimum 1 per 1000 tons	1200 gm per test	ASTM D 2041	AERM-11 and AERM-14
Bulk Specific Gravity	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 2726	AERM-11 and AERM-14
Marshall Stability and Flow	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 1559	AERM-11 and AERM-14
% Air Voids	Minimum 1 per 1000 tons		ASTM D 3203	AERM-11 and AERM-14
Extraction	Minimum 1 per 1000 tons	1000 gm (surface) 1500 gm (base)	ASTM D 2172	AERM-11 and AERM-14
Ignition Oven Test	Minimum 1 per 1000 tons	1500 gm		AERM-14
Nuclear Asphalt Gauge	Minimum 1 per 1000 tons	1000-1100 gm	ASTM D 2145	AERM-14

MIX DESIGN TESTING

PARAMETER	FREQUENCY	SAMPLE SIZE	TEST METHOD	REPORT FORM
Representative samples of each aggregate and asphalt cement.	1 per aggregate and 1 asphalt cement.	280 lb. (coarse) 150 lb. (fine) 15 lb. (min. filler) 1 gallon asphalt cement	ASTM D 75	N/A
Aggregate Gradation	1 per aggregate	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm	ASTM C 136	Bituminous Worksheet (Appendix A)
Maximum Specific Gravity	2 per specified asphalt content	1200 gm per test	ASTM D 2041	Bituminous Worksheet (Appendix A)
Bulk Specific Gravity	3 briquettes per specified asphalt content	1250 gm per briquette	ASTM D 2726	Bituminous Worksheet (Appendix A)
Marshall Stability and Flow	3 briquettes	1250 gm per briquette	ASTM D 1559	Bituminous Worksheet (Appendix A)
% Air Voids	1 per specified asphalt content (Avg. of G_{sb}/G_{mm})		ASTM D 3203	Bituminous Worksheet (Appendix A)

QUALITY CONTROL TESTING (PAVER)

PARAMETER	FREQUENCY	SAMPLE SIZE	TEST METHOD	REPORT FORM
Nuclear Density Test	As required by the Contractor to maintain consistent passing density	Various locations	ASTM D 2950	

APPENDIX C

AGGREGATE BITUMINOUS BASE COURSE

Percentage by Weight Passing Sieves Job Mix Formula (JMF)		
Sieve Size	Gradation B Range 1" Maximum	Ideal Target
1-1/4 in.	---	---
1 in.	100	100
3/4 in.	93 – 97	95
1/2 in.	75 – 79	77
3/8 in.	64 – 68	66
No. 4	45 – 51	48
No. 8	34 – 40	37
No. 16	27 – 33	30
No. 30	19 – 23	21
No. 100	6 – 10	8
No. 200	4 – 6	5
Bitumen %: Stone	4.5 – 7.0	5.5

AGGREGATE BITUMINOUS SURFACE COURSE

Percentage by Weight Passing Sieves Job Mix Formula (JMF)		
Sieve Size	Gradation B Range ¾" Maximum	Ideal Target
1 in.	100	---
3/4 in.	100	100
1/2 in.	99 - 100	100
3/8 in.	91 - 97	94
No. 4	56 – 62	59
No. 8	36 - 42	39
No. 16	27 - 32	30
No. 30	19 - 25	22
No. 100	7 – 9	8
No. 200	5 – 7	6
Bitumen %: Stone	5.0 – 7.0	6.0

APPENDIX 2
Policy Memorandum 96-1
Item 610, Structural Portland Cement Concrete:
Job Mix Formula Approval & Production Testing
2 Pages

State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

January 1, 2004	Springfield	Number 96-1

TO: CONSULTING ENGINEERS

SUBJECT: ITEM 610, STRUCTURAL PORTLAND CEMENT CONCRETE: JOB MIX FORMULA APPROVAL & PRODUCTION TESTING.

I. This policy memorandum addresses the Job Mix Formula (JMF) approval process and production testing requirements when Item 610 is specified for an airport construction contract.

II. PROCESS

a. The contractor may submit a mix design with recent substantiating test data or he may submit a mix design generated by the Illinois Division of Highways with recent substantiating test data for approval consideration. The mix design should be submitted to the Resident Engineer.

b. The Resident Engineer should verify that each component of the proposed mix meets the requirements set forth under Item 610 of the *Standard Specifications for Construction of Airports* and/or the contract special provisions.

c. The mix design should also indicate the following information:

1. The name, address, and producer/supplier number for the concrete.
2. The source, producer/supplier number, gradation, quality, and SSD weight for the proposed coarse and fine aggregates.
3. The source, producer/supplier number, type, and weight of the proposed flyash and/or cement.
4. The source, producer/supplier number, dosage rate or dosage of all admixtures.

d. After completion of Items b and c above, the mix with substantiating test data shall be forwarded to the Division of Aeronautics for approval. Once the mix has been approved the production testing shall be at the rate in Section III as specified herein.

III. PRODUCTION TESTING

a. One set of cylinders or beams, depending on the strength specified, shall be cast for acceptance testing for each day the mix is used. In addition, at least one slump and one air test shall be conducted for each day the mix is used. If more than 100 c.y. of the mix is placed in a given day, additional tests at a frequently of 1 per 100 c.y. shall be taken for strength, slump, and air. In **no** case will concrete with a slump greater than 4 inches be allowed for use on the project.

b. If the total proposed amount of Item 610 Structural Portland Cement Concrete as calculated by the Resident Engineer is less than 50 c.y. for the entire project, the following shall apply:
   - The Resident Engineer shall provide a copy of the calculations of the quantity of Item 610 to the Division of Aeronautics.
   - One set of cylinders or beams, depending the strength specified, shall be cast for acceptance testing.
   - One air content and one slump test shall be taken for acceptance testing.
   - In no case will concrete with a slump greater than 4 inches be allowed for use on the project.

c. The Resident Engineer shall collect actual batch weight tickets for every batch of Item 610 concrete used for the project. The actual batch weight tickets shall be kept with the project records and shall be available upon request of the Department of Transportation.

Steven J. Long, P.E.
Acting Chief Engineer

Supersedes Policy Memorandum 96-1 dated January 1, 2003

APPENDIX 3
Illinois Department of Transportation
Storm Water Pollution Prevention Plan (SWPPP)
8 Pages

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route _____ Marked _____

Section **Abraham Lincoln Capital Airport** Project No. **SPI-3488**

County Sangamon

This plan has been prepared to comply with the provisions of the NPDES Permit Number ILR10, issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

Signature Date

_____

Title

1. Site Description

a. The following is a description of the construction activity which is the subject of this plan (use additional pages, as necessary):
The Springfield Airport Authority and the Illinois Department of Transportation - Division of Aeronautics propose to extend Parallel Taxiway B and construct a new Connecting Taxiway B and construct new Blast Pad for Runway 31 at Capital Airport in Springfield, IL. The project includes new bituminous pavement construction, removal and replacement of storm sewer structures and pipes, earth excavation at designated borrow area, clearing and grubbing and grading existing ditches, pavement marking, and other incidental work as shown in the plans.

b. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading (use additional pages, as necessary):
The improvements will consist of the following:

Excavating borrow area and constructing embankment for Taxiway construction. Installing new drainage structures and re grading drainage area. Constructing new bituminous pavements. All disturbed areas will be turfed at the completion of the project.

c. The total area of the construction site is estimated to be **17±** acres.

The total area of the site that it is estimated will be disturbed by excavation, grading or other acres. 17±

d. ~~The estimated runoff coefficients of the various areas of the site after construction activities are completed are contained in the project drainage study which is hereby incorporated by reference in this plan. Information describing the soils at the site is contained either in the Soils Report for the project, which is hereby incorporated by reference, or in an attachment to this plan.~~

e. The ~~design/project report, hydraulic report, or~~ plan documents, hereby incorporated by reference, contain site map(s) indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of major soil disturbance, the location of major structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where storm water is discharged to a surface water.

f. ~~The names of receiving water(s) and areal extent of wetland acreage at the site are in the design/project report or plan documents which are incorporated by reference as a part of this plan.~~

2. Controls

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b. above. For each measure discussed, the contractor that will be responsible for its implementation is indicated. Each such contractor has signed the required certification on forms which are attached to, and a part of, this plan:

a. Erosion and Sediment Controls

(i) Stabilization Practices. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided in 2.a.(i).(A) and 2.b., stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased on all disturbed portions of the site where construction activity will not occur for a period of 21 or more calendar days.

(A) where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

Description of Stabilization Practices (use additional pages, as necessary):

1. Temporary Stabilization - In areas of new soil embankments, existing vegetation, silt fence and inlet protection will serve to intercept the waterborne silts and prevent it from entering the storm drain system or leaving the site.

Construction operations will be phased to limit disturbed areas during construction.

Existing turf areas will be protected where possible to limit disturbed surfaces and provide for dissipation of run-off velocity.

2. Permanent Stabilization - All areas disturbed by construction operations will be stabilized with permanent seeding and mulching following final grading. Excelsior blanket will be placed in problem locations as needed. Sod will be placed along the airfield pavements to dissipate runoff velocity and stabilize shoulders. See plan sheets.

(ii) **Structural Practices.** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act

Description of Structural Practices (use additional pages, as necessary):

Inlet protection will be in-place before all earthmoving activities to prevent waterborne silts from entering the existing storm drain system.

Silt fence will be used as an erosion control barrier in areas where flow is concentrated and where runoff from disturbed areas has potential to travel off site or enter into the existing drainage system (swales or drains).

b. Storm Water Management

Provided below is a description of measures that will be installed during the construction process to contro pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

(I) Such practices may include: storm water detention structures (including wet ponds); storm wate retention structures; flow attenuation by use of open vegetated swales and natural depressions infiltration of runoff on site; and sequential systems (which combine several practices). **The practices selected for implementation were determined on the basis of the technical guidance in Sectior 10-300 (Design Considerations) in Chapter 10 (Erosion and Sedimentation Control) of the Illinois Department of Transportation Drainage Manual. If practices other than those discussed ir Section 10-300 are selected for implementation or if practices are applied to situations differen from those covered in Section 10-300, the technical basis for such decisions will be explainec below.**

(ii) Velocity dissipation devices will be placed at discharge locations and along the length of any outfal channel as necessary to provide a non-erosive velocity flow from the structure to a water course so tha the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls (use additional pages, as necessary):

The existing storm water management system will continue to be utilized after construction.

c. Other Controls

(i) Waste Disposal. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

(ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

d. Approved State or Local Plans

The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, 1995. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

Not applicable.

3. Maintenance

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan (use additional pages, as necessary):

During construction, the contractor shall:

- Clean up, stabilize and grade work area to eliminate concentration of runoff.

- Maintain or replace erosion control items as directed by the Resident Engineer.

- Limit the areas to be disturbed.

- Restrict work to only those areas required to complete the project.

All maintenance of erosion control systems will be the responsibility of the contractor. All locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically. Inspection of these areas shall be made at least once every seven days and within 24 hours of the end of each 0.5 inches or greater rainfall, or an equivalent snowfall.

Contractor shall follow inspection procedures as described in the Inspections section below. The Contractor's responsibility shall end after final acceptance of the project..

4. Inspections

Qualified personnel shall inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 above and pollution prevention measures identified in section 2 above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section 4.b. shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The report of noncompliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

5. Non-Storm Water Discharges

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge. (Use additional pages as necessary to describe non-storm water discharges and applicable pollution control measures).

Not applicable.

Continued from Page 1:

1.Site Description

b.

Constructing a new Blast Pad to Runway 31. No drainage improvements will be needed. Grading and drainage will be done as part of the project. All disturbed areas will be turfed at the completion of the projec

Illinois Department of Transportation

Contractor Certification Statement

This certification statement is a part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with NPDES Permit No. ILR10, issued by the Illinois Environmental Protection Agency on May 14, 1998.

Project Information: Runway 13/31 RSA Improvements; Extend Taxiway B

Route _____ Marked _____

Section Abraham Lincoln Capital Airport Project No. SPI-3488

County Sangamon

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

_____ _____
Signature Date

_____
Title

_____
Name of Firm

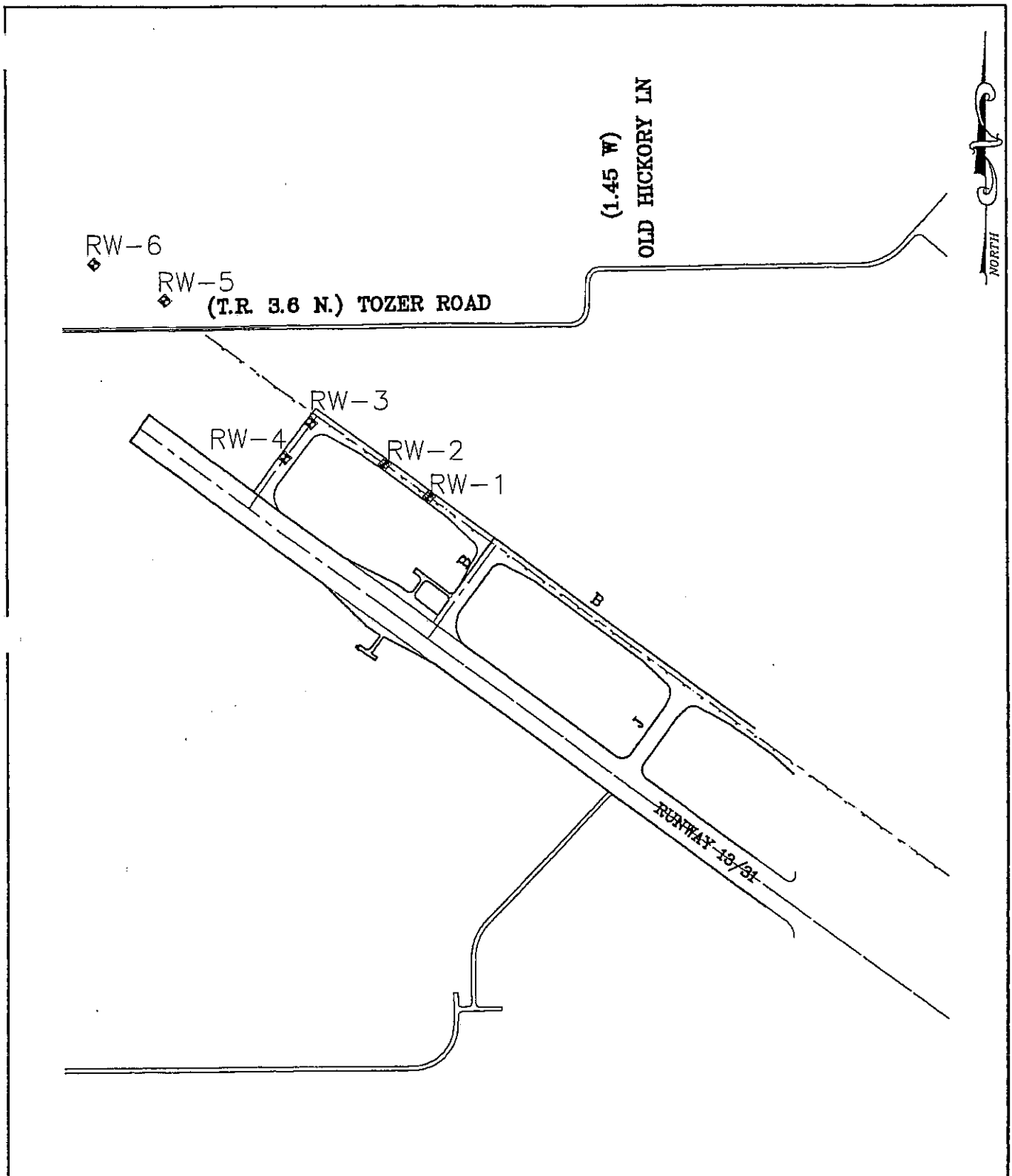
_____
Street Address

_____
City State

_____
Zip Code

_____
Telephone Number

APPENDIX 4
Geotechnical Information
18 Pages



BORING LOCATION DIAGRAM			
Project Name: Abraham Lincoln Capitol Airport Springfield, Illinois	**Geo Services, Inc.** Geotechnical, Environmental & Civil Engineering 805 Amherst Court, Suite 204 Naperville, Illinois 60565 (630) 355-2838	DRAWN BY	DTJ
		APPROVED BY	AJP
		DATE	02/06/07
		GSI JOB No.	06165
		SCALE	NTS

LOG OF BORING NO. RW-1

CLIENT
Crawford, Murphy & Tilly, Inc.

BORING LOCATION
Runway 13/31
Station: 119+50, Taxiway "B" Centerline

PROJECT LOCATION
Abraham Lincoln Capitol Airport

PROJECT DESCRIPTION
Runway 13/31 Construction, Taxiway "B" Extension

DEPTH (ft.) BELOW GROUND SURFACE	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	SAMPLE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
					GROUND SURFACE ELEVATION 585.15	
	1	AS			TOPSOIL–black & brown–stiff (CL)	
	2	SS			SILTY CLAY–trace sand & gravel–brown & gray–very stiff (CL)	
5.0	3	SS			SILTY CLAY–trace sand & gravel–brown & gray–very stiff (CL/ML)	
	4	SS			SILT–trace fine sand–brown & gray–medium dense (ML)	
10.0	5	SS			SILTY CLAY–trace sand & gravel–brown & gray–stiff (CL)	103

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²

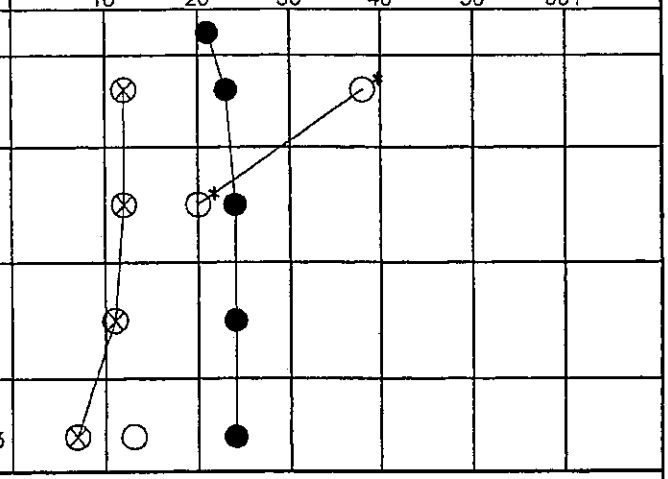
CALIBRATED PENETROMETER TONS/FT.²

1 2 3 4 5 6+

WATER ● CONTENT %

STANDARD "N" PENETRATION (BLOWS/FT.)

10 20 30 40 50 60+



END OF BORING

WATER LEVEL OBSERVATIONS	
Water Level While Drilling	Dry
Water Level After Boring	Dry

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

BORING STARTED	November 7, 2006		
BORING COMPLETED	November 7, 2006		
RIG	CME-25	FOREMAN	RH
DRAWN	DTJ	APPROVED	AJP
GSI JOB No.	06165	SHEET	1 OF 1

LOG OF BORING NO. RW-2

CLIENT
Crawford, Murphy & Tilly, Inc.

BORING LOCATION
Runway 13/31
Station: 117+00, Taxiway "B" Centerline

PROJECT LOCATION
Abraham Lincoln Capitol Airport

PROJECT DESCRIPTION
Runway 13/31 Construction, Taxiway "B" Extension

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}
CALIBRATED PENETROMETER TONS/FT.^{2}
1 2 3 4 5 6+
WATER ● CONTENT %
STANDARD "N" PENETRATION (BLOWS/FT.)
10 20 30 40 50 60+

DEPTH (ft.) BELOW GROUND SURFACE	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	SAMPLE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.^{3}
					GROUND SURFACE ELEVATION 582.71	
	1	AS			TOPSOIL–black & brown–stiff (CL)	
	2	SS			SILTY CLAY with Silt Streaks–trace sand & gravel–dark brown–very stiff (CL/ML)	
5.0	3	SS				
	4	SS			SILTY CLAY–trace sand & gravel–brown & gray–very stiff (CL)	103
10.0	5	SS				105

END OF BORING

WATER LEVEL OBSERVATIONS
Water Level While Drilling Dry
Water Level After Boring Dry

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

BORING STARTED	November 7, 2006
BORING COMPLETED	November 7, 2006
RIG CME-25	FOREMAN RH
DRAWN DTJ	APPROVED AJP
GSI JOB No. 06165	SHEET 1 OF 1

LOG OF BORING NO. RW-3

CLIENT
Crawford, Murphy & Tilly, Inc.

BORING LOCATION
Runway 13/31
Station: 113+25, Offset: 50' RT

PROJECT LOCATION
Abraham Lincoln Capitol Airport

PROJECT DESCRIPTION
Runway 13/31 Construction, Toxiway "B" Extension

DEPTH (ft.) BELOW GROUND SURFACE	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	SAMPLE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
					GROUND SURFACE ELEVATION 579.73	
	1	AS			SILTY CLAY–black & brown–stiff (CL)	
	2	SS			SILTY CLAY–trace sand & gravel–brown & gray–very stiff (CL)	
5.0	3	SS			SILT–trace fine sand–brown & gray–medium dense (ML)	
	4	SS			SILTY CLAY–trace sand & gravel–brown & gray–stiff (CL)	103
10.0	5	SS				99

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²

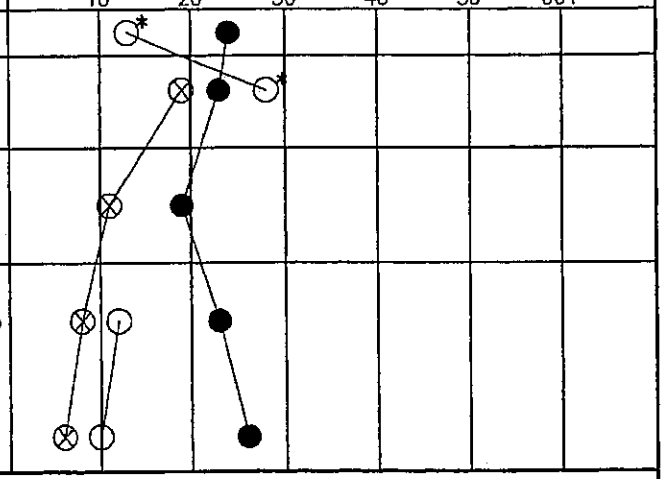
CALIBRATED PENETROMETER TONS/FT.²

1 2 3 4 5 6+

WATER ● CONTENT %

STANDARD "N" PENETRATION (BLOWS/FT.)

10 20 30 40 50 60+



END OF BORING

WATER LEVEL OBSERVATIONS	
Water Level While Drilling	Dry
Water Level After Boring	Dry

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

BORING STARTED	November 7, 2006		
BORING COMPLETED	November 7, 2006		
RIG	CME-25	FOREMAN	RH
DRAWN	DTJ	APPROVED	AJP
GSI JOB No.	06165	SHEET	1 OF 1

LOG OF BORING NO. RW-4

CLIENT
Crawford, Murphy & Tilly, Inc.

BORING LOCATION
Runway 13/31
Station: 113+25, Offset: 225' LT

PROJECT LOCATION
Abraham Lincoln Capitol Airport

PROJECT DESCRIPTION
Runway 13/31 Construction, Taxiway "B" Extension

DEPTH (ft.) BELOW GROUND SURFACE	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	SAMPLE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
					GROUND SURFACE ELEVATION 575.45	
	1	AS			SILTY CLAY–trace sand & gravel–brown & gray–stiff to very stiff (CL)	
	2	SS				
5.0	3	SS				101
	4	SS				98
10.0	5	SS			SILTY CLAY–trace sand & gravel–brown & gray–very stiff (CL/ML)	

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²

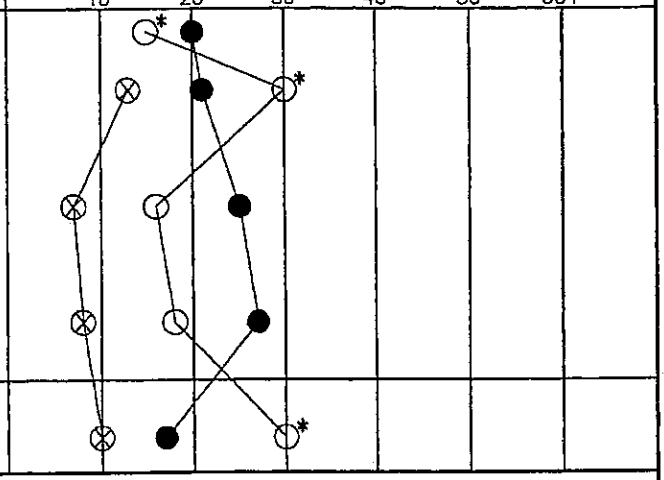
CALIBRATED PENETROMETER TONS/FT.²

1 2 3 4 5 6+

WATER ● CONTENT %

STANDARD "N" PENETRATION (BLOWS/FT.)

10 20 30 40 50 60+



END OF BORING

WATER LEVEL OBSERVATIONS	
Water Level While Drilling	Dry
Water Level After Boring	Dry

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

BORING STARTED	November 7, 2006		
BORING COMPLETED	November 7, 2006		
RIG	CME-25	FOREMAN	RH
DRAWN	DTJ	APPROVED	AJP
GSI JOB No.	06165	SHEET	1 OF 1

LOG OF BORING NO. RW-5

CLIENT
Crawford, Murphy & Tilly, Inc.

BORING LOCATION
Runway 13/31
Station: 104+43, Offset: 18' RT

PROJECT LOCATION
Abraham Lincoln Capitol Airport

PROJECT DESCRIPTION
Runway 13/31 Construction, Taxiway "B" Extension

DEPTH (ft.) BELOW GROUND SURFACE	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	SAMPLE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.^{3}
					GROUND SURFACE ELEVATION 583.08	
	1	AS			SILTY CLAY–dark brown (CL)	
	2	SS			SILTY CLAY–trace sand & gravel–brown & gray–stiff to hard (CL/ML)	
	3	SS				
5.0						
	4	SS				
	5	SS				
10.0						
	6	SS			SILTY CLAY–trace sand & gravel–brown & gray–stiff to very stiff (CL)	101
	7	SS				103
15.0						

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}

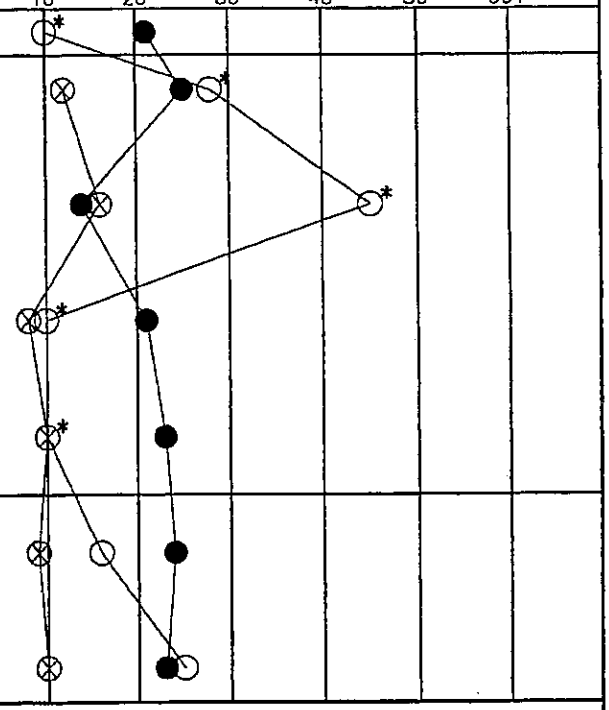
CALIBRATED PENETROMETER TONS/FT.^{2}

1 2 3 4 5 6+

WATER ● CONTENT %

STANDARD "N" PENETRATION (BLOWS/FT.)

10 20 30 40 50 60+



END OF BORING

WATER LEVEL OBSERVATIONS	
Water Level While Drilling	Dry
Water Level After Boring	Dry

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

BORING STARTED	November 7, 2006		
BORING COMPLETED	November 7, 2006		
RIG	CME–25	FOREMAN	RH
DRAWN	DTJ	APPROVED	AJP
GSI JOB No.	06165	SHEET	1 OF 1

LOG OF BORING NO. RW-6

CLIENT
Crawford, Murphy & Tilly, Inc.

BORING LOCATION
Runway 13/31
Station: 100+80, Offset: 46' LT

PROJECT LOCATION
Abraham Lincoln Capitol Airport

PROJECT DESCRIPTION
Runway 13/31 Construction, Taxiway "B" Extension

GROUND SURFACE ELEVATION 582.67

DEPTH (ft.) BELOW GROUND SURFACE	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	SAMPLE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.^{3}
	1	AS			SILTY CLAY–dark brown (CL)	
	2	SS			SILTY CLAY–trace sand & gravel–brown & gray–very stiff to hard (CL)	
5.0	3	SS				
	4	SS			SILTY CLAY–trace sand & gravel–brown & gray–medium stiff to stiff (CL/ML)	
10.0	5	SS				
	6	SS			SILTY CLAY–trace sand & gravel–brown & gray–stiff (CL)	101
15.0	7	SS				103

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2}

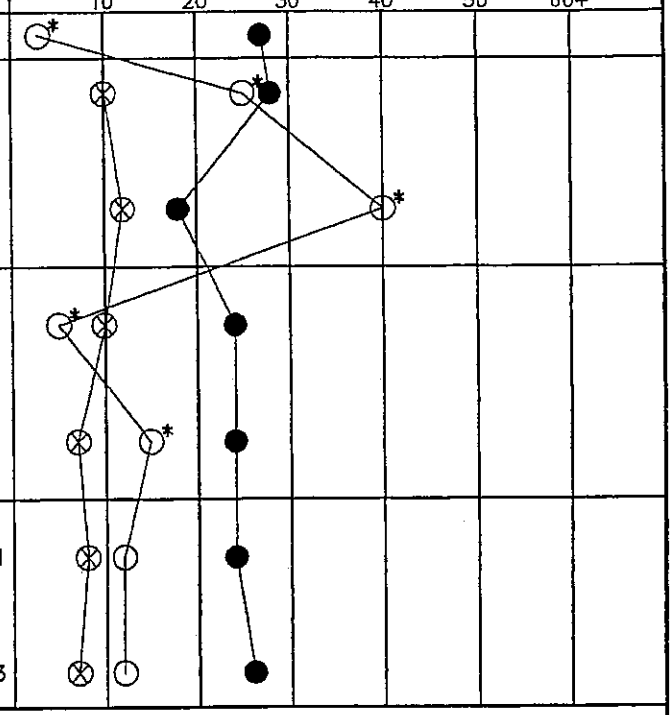
CALIBRATED PENETROMETER TONS/FT.^{2}

1 2 3 4 5 6+

WATER ● CONTENT %

STANDARD "N" PENETRATION (BLOWS/FT.)

10 20 30 40 50 60+



END OF BORING

WATER LEVEL OBSERVATIONS	
Water Level While Drilling	Dry
Water Level After Boring	Dry

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GSI JOB No.	06165	SHEET	1 OF 1

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering

Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D 4318

Project Name Capital Airport Runway 13/31 RSA Improvements Job No 06165

Location Springfield, Illinois Date 12/13/06

Client CMT (AIP Project No. 3-17-0096-42)

Boring No.	RW-2	RW-5 & 6						
Depth	2.0' - 6.0'	2.0' - 6.0'						
Sample No.	-	-						
LIQUID LIMIT (LL)	29	32						
PLASTIC LIMIT (PL)	24	27						
PLASTICITY INDEX (PI)	5	5						

Tested by DB

Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering

Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D 4318

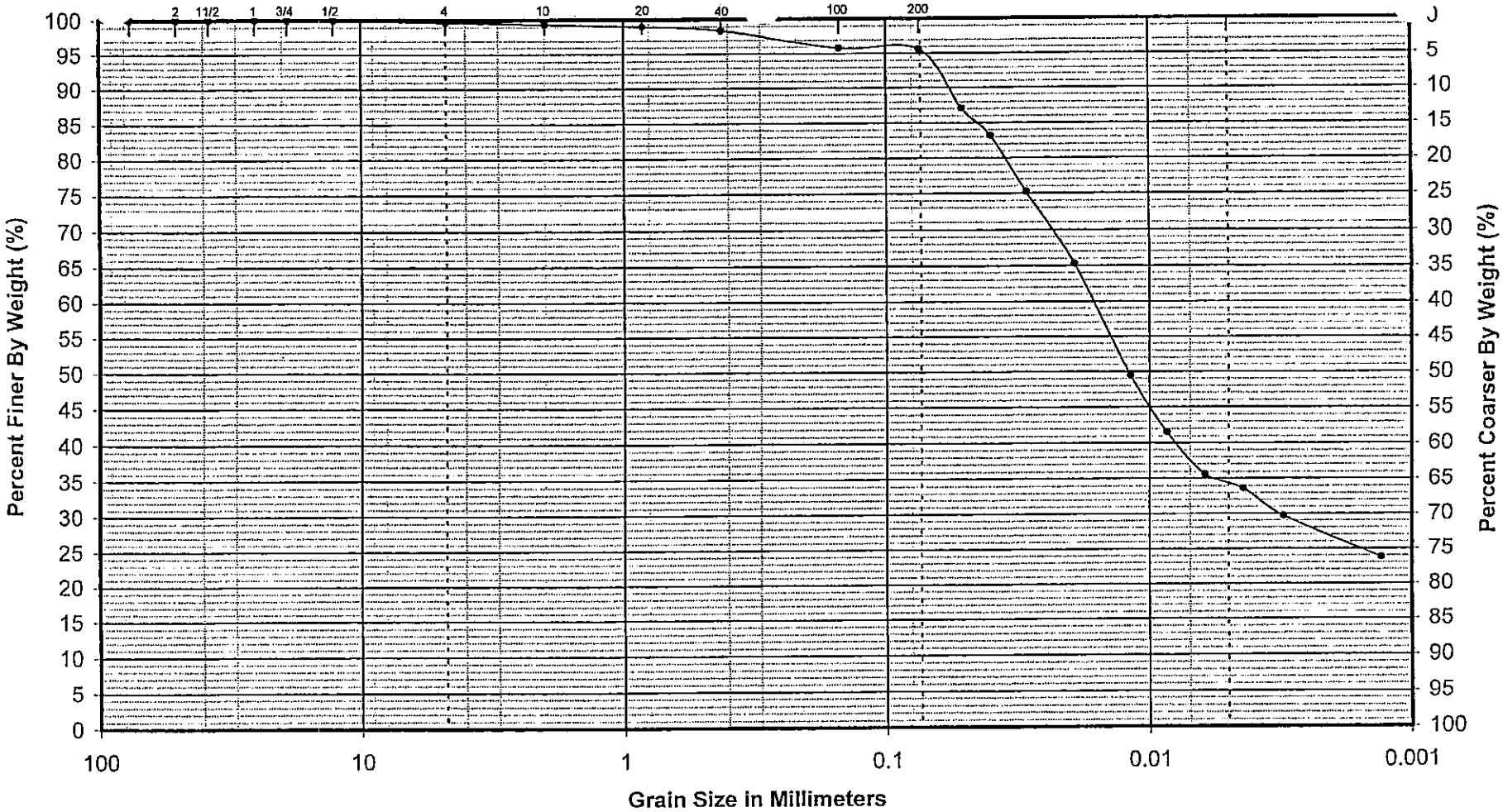
Project Name Capital Airport Runway 13/31 RSA Improvements Job No 06165

Location Springfield, Illinois Date 2/21/07

Client CMT (AIP Project No. 3-17-0096-42)

Boring No.	RW-1 & 2							
Depth	0' - 1.0'							
Sample No.	-							
LIQUID LIMIT (LL)	43							
PLASTIC LIMIT (PL)	21							
PLASTICITY INDEX (PI)	22							

Tested by DB

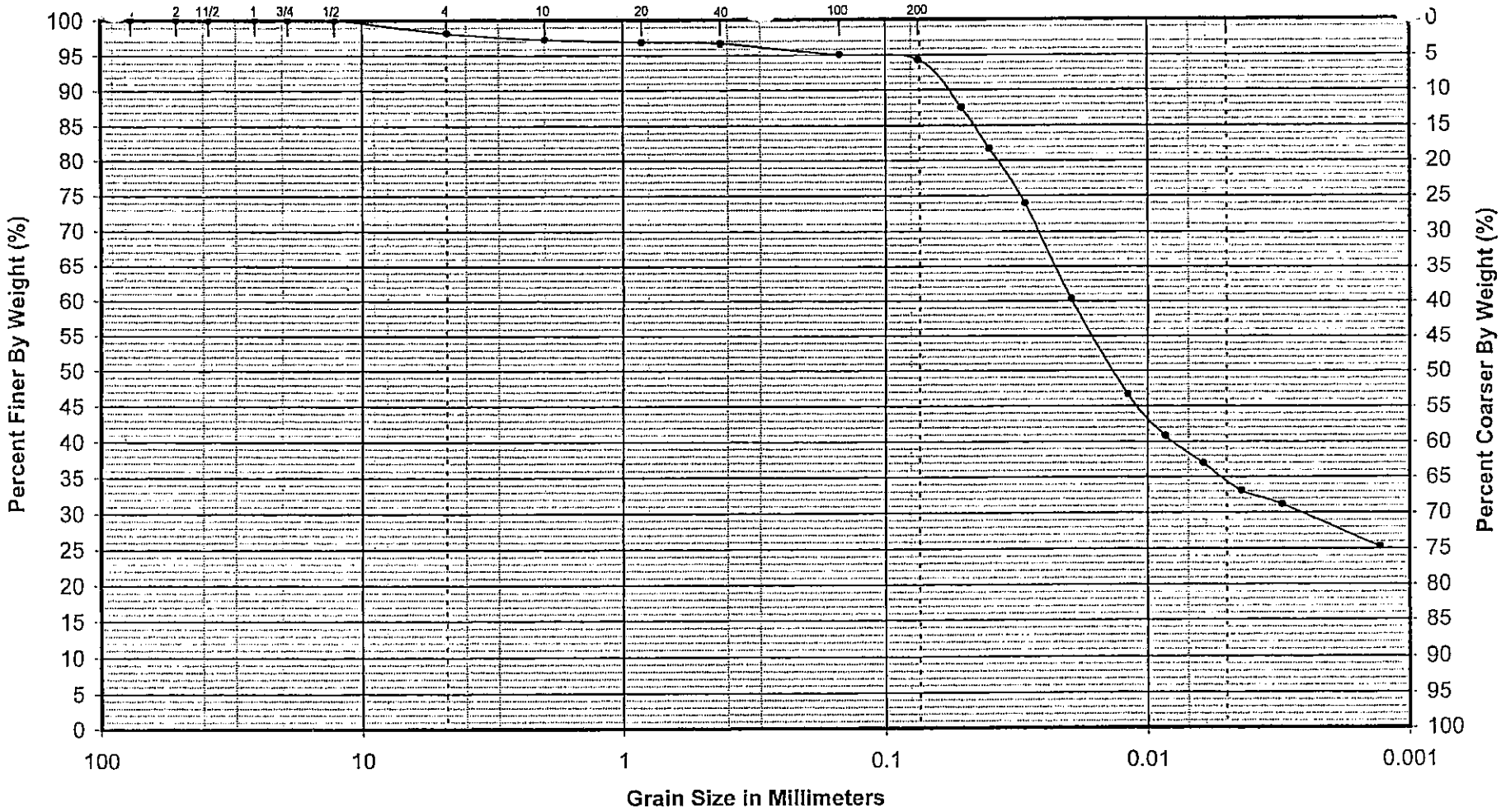


GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		

Sample No.	ASTM				ASTM CLASSIFICATION D 2487	PARTICLE SIZE ANALYSIS ASTM D 422
	D 2216	D 4318			SILTY CLAY(CL/ML)-dark brown Gravel = 0.0% Sand = 5.0% Silt = 60.5% Clay = 34.5%	Capital Airport Runway 13/31 RSA Improvements AIP Project #3-17-0096-42 Springfield, IL
	w_c	LL	PL	PI		
RW-2 2.0'-6.0'	-	29	24	5		

DRAWN	APPROVED	DATE	JOB NO.
DB	AJP	12/13/06	06165

GEO SERVICES, INC.
1235 EAST DAVIS STREET
ARLINGTON HEIGHTS, ILLINOIS 60005
Phone No. (847) 253-3845 Fax No. (847) 253-0482



GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		

Sample No.	ASTM				ASTM CLASSIFICATION D 2487	PARTICLE SIZE ANALYSIS ASTM D 422
	D 2216	D 4318			SILTY CLAY(CL/ML)-brown Gravel = 2.0% Sand = 3.5% Silt = 60.0% Clay = 34.5%	Capital Airport Runway 13/31 RSA Improvements AIP Project #3-17-0096-42 Springfield, IL
	w_c	LL	PL	PI		
RW-5 & 6 2.0'-6.0'	-	32	27	5		

DRAWN	APPROVED	DATE	JOB NO.
JE	AJP	12/13/06	06165

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1235 EAST DAVIS STREET
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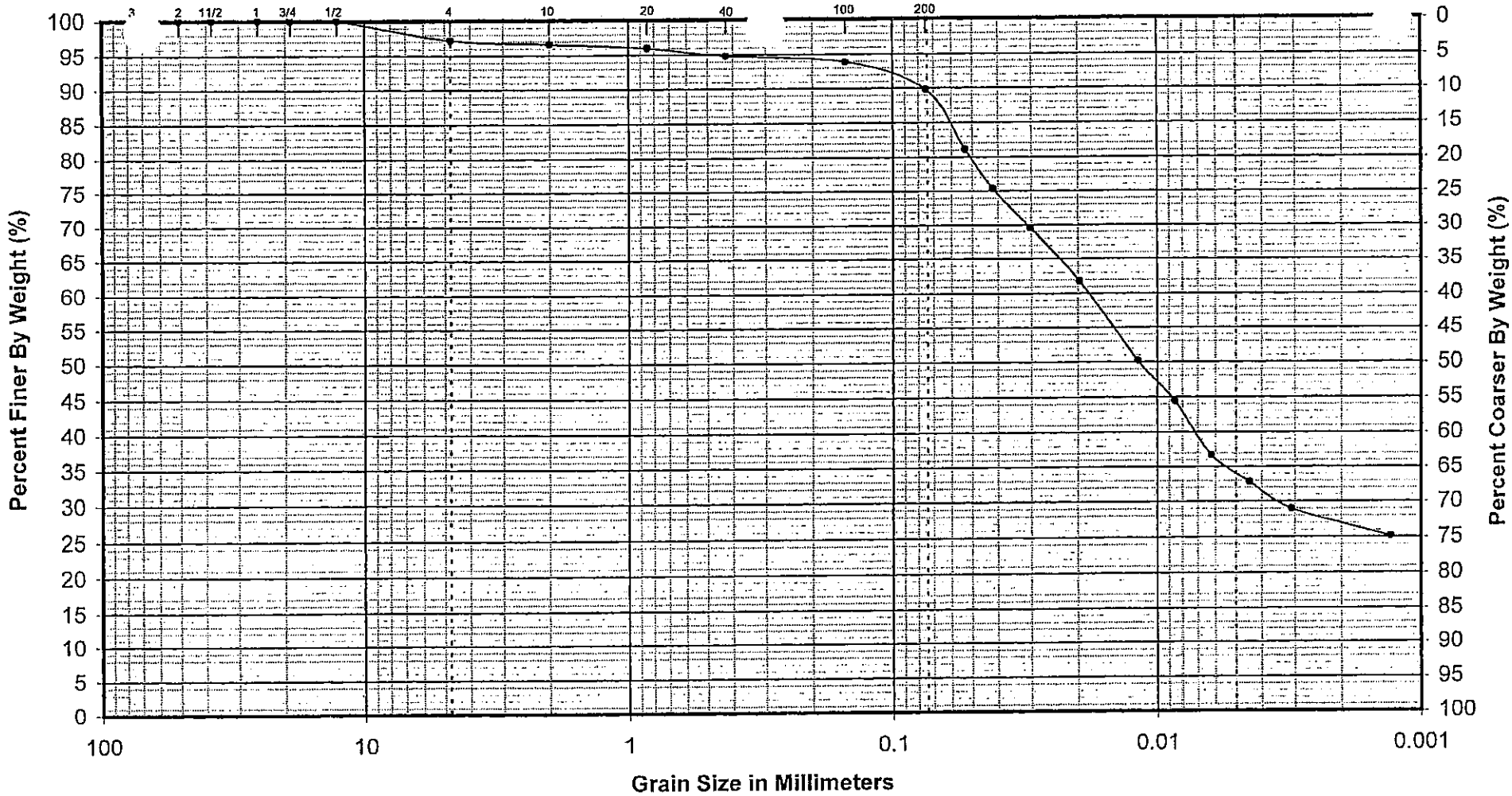

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		

Sample No.	ASTM				ASTM CLASSIFICATION D 2487	PARTICLE SIZE ANALYSIS ASTM D 422
	D 2216	D 4318			LEAN CLAY (CL)-dark brown Gravel = 3.0% Sand = 7.0% Silt = 56.0% Clay = 34.0%	Capital Airport Runway 13/31 RSA Improvements AIP Project #3-17-0096-42 Springfield, IL
	w_c	LL	PL	PI		
RW-1 & 2 0' - 1.0'	-	43	21	22		

DRAWN	APPROVED	DATE	JOB NO.
DB	AJP	02/22/07	06165

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Geo Services, Inc.
Geotechnical, Environmental and Civil Engineering

805 Amherst Court, Suite 205
Naperville, IL 60565
(630) 305-9186

CBR (California Bearing Ratio) of Laboratory-Compacted Soils-ASTM D 1883

Project Name: Capital Airport, Runway 13/31 RSA Improvements
AIP Project No. 3-17-0096-42

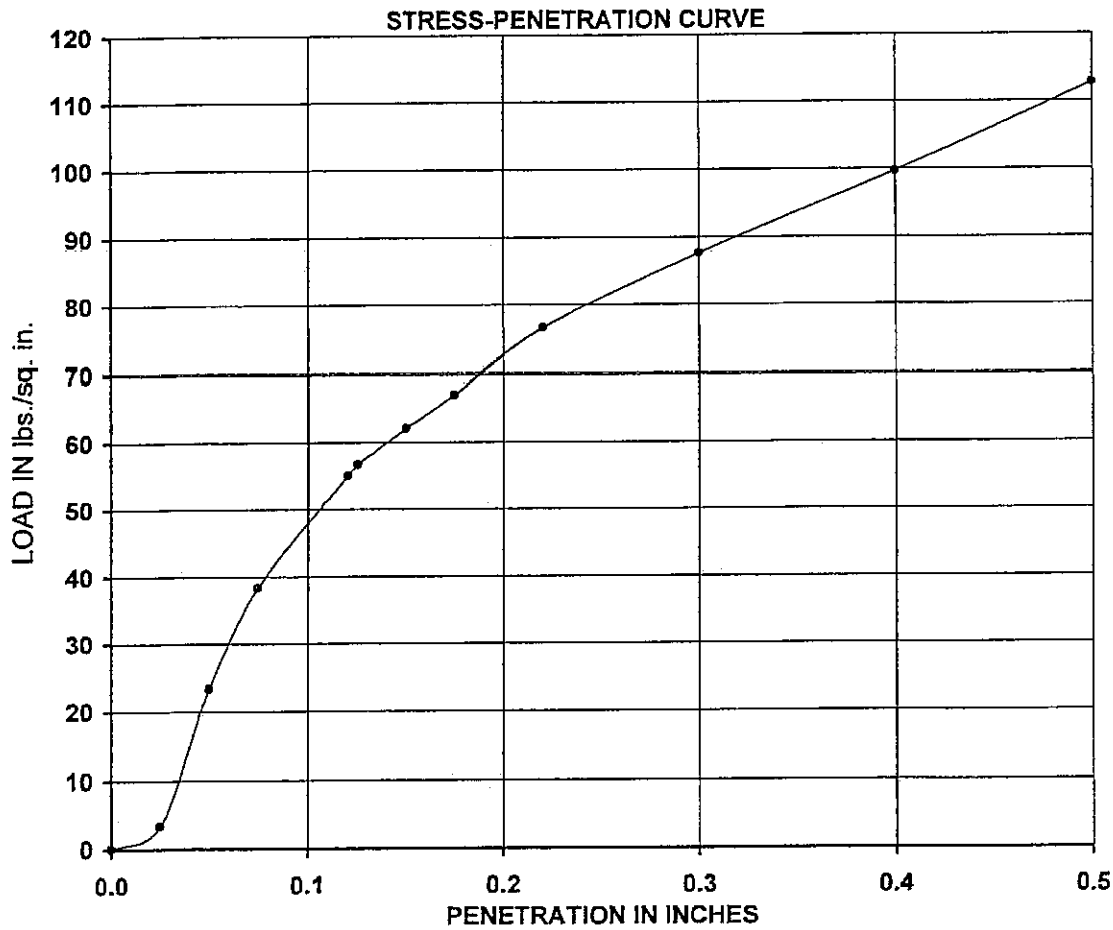
Location	Springfield, Illinois
Job No.	06165
Date	12/11/06
Boring No	RW-2
Depth	2.0'-6.0'

	Molded	Soaked
Max. Dry Density (PCF)	115.1	
Target Moisture (%)	13.2	
Method of Compaction	Modified	
Actual Dry Density (PCF)	109.4	103.0
Actual W/C (%)	13.4	23.5

Sample Description: SILTY CLAY (CL/ML)-dark brown

Test Results

% of Expansion	3.8
BR 0.1"	5.5
BR 0.2"	5.1
LL	29
PL	24
PI	5
Pen. Correction	.02
Tested by	JE



Geo Services, Inc.

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Naperville, IL 60565
(630) 305-9186

CBR (California Bearing Ratio) of Laboratory-Compacted Soils-ASTM D 1883

Project Name: Capital Airport, Runway 13/31 RSA Improvements
AIP Project No. 3-17-0096-42

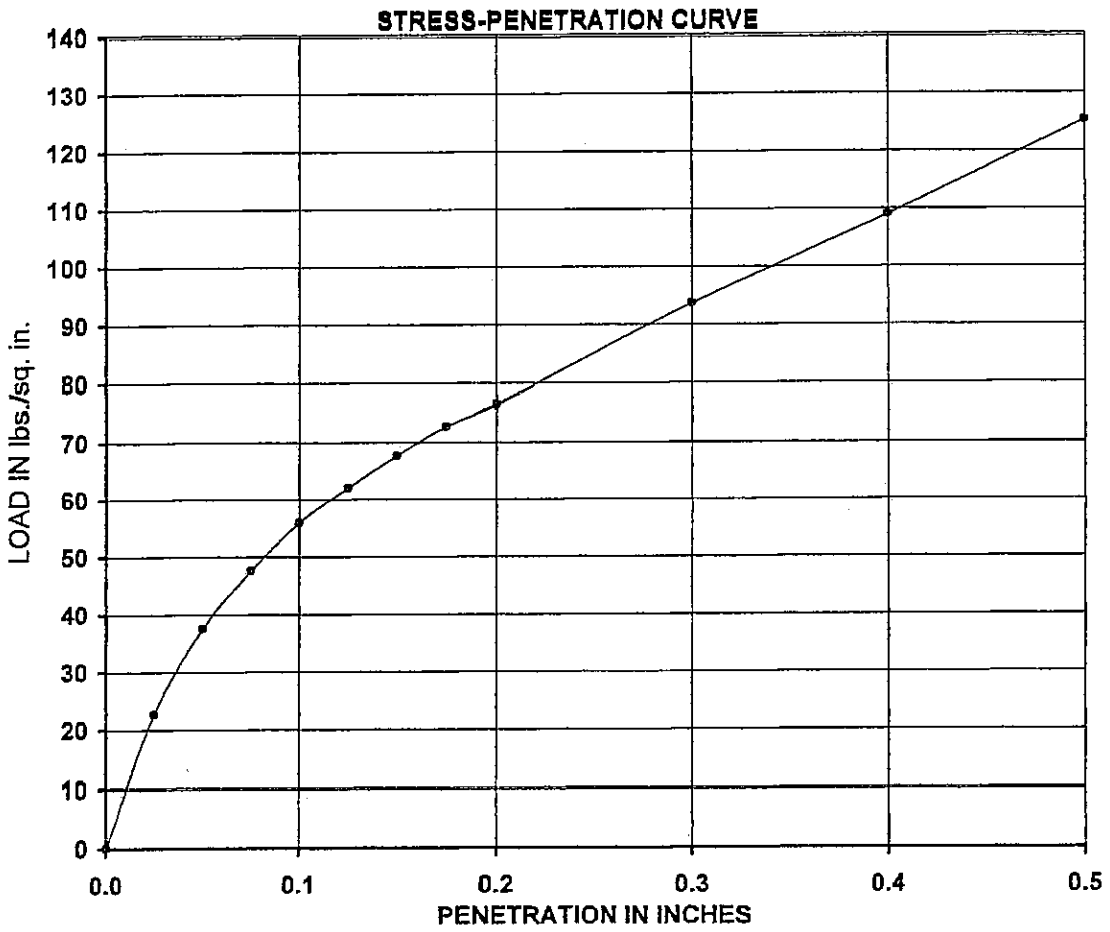
Location	Springfield, Illinois
Job No.	06165
Date	12/11/06
Boring No	RW-5 & 6 Combined
Depth	2.0'-6.0'

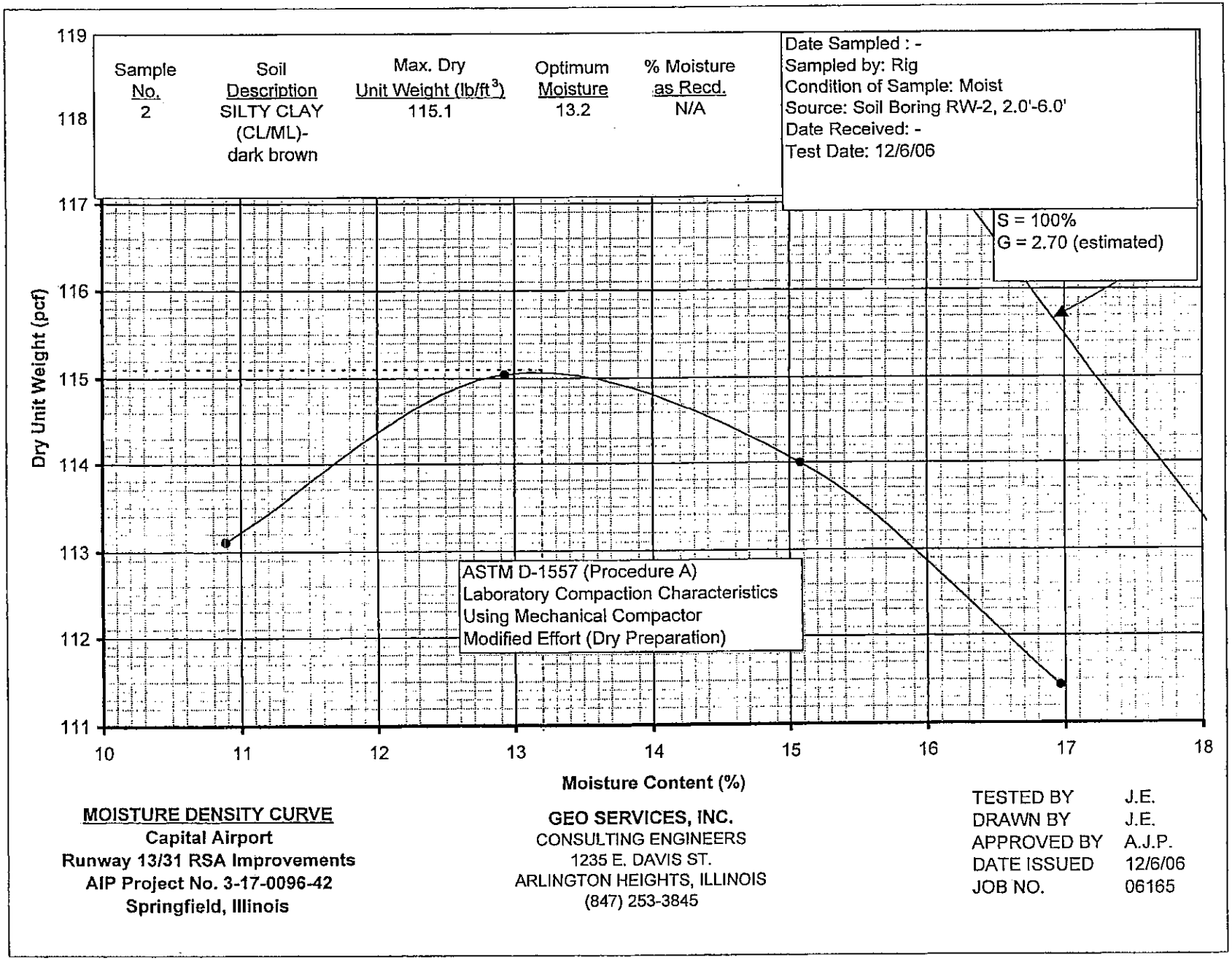
Max. Dry Density (PCF)	116.4	
Target Moisture (%)	13.0	
Method of Compaction	Modified	
	Molded	Soaked
Actual Dry Density (PCF)	110.7	103.8
Actual W/C (%)	13.0	23.4

Sample Description: SILTY CLAY (CL/ML)-brown

Test Results

% of Expansion	3.7
BR 0.1"	5.6
BR 0.2"	5.1
LL	32
PL	27
PI	5
Pen. Correction	0.0
Tested by	JE

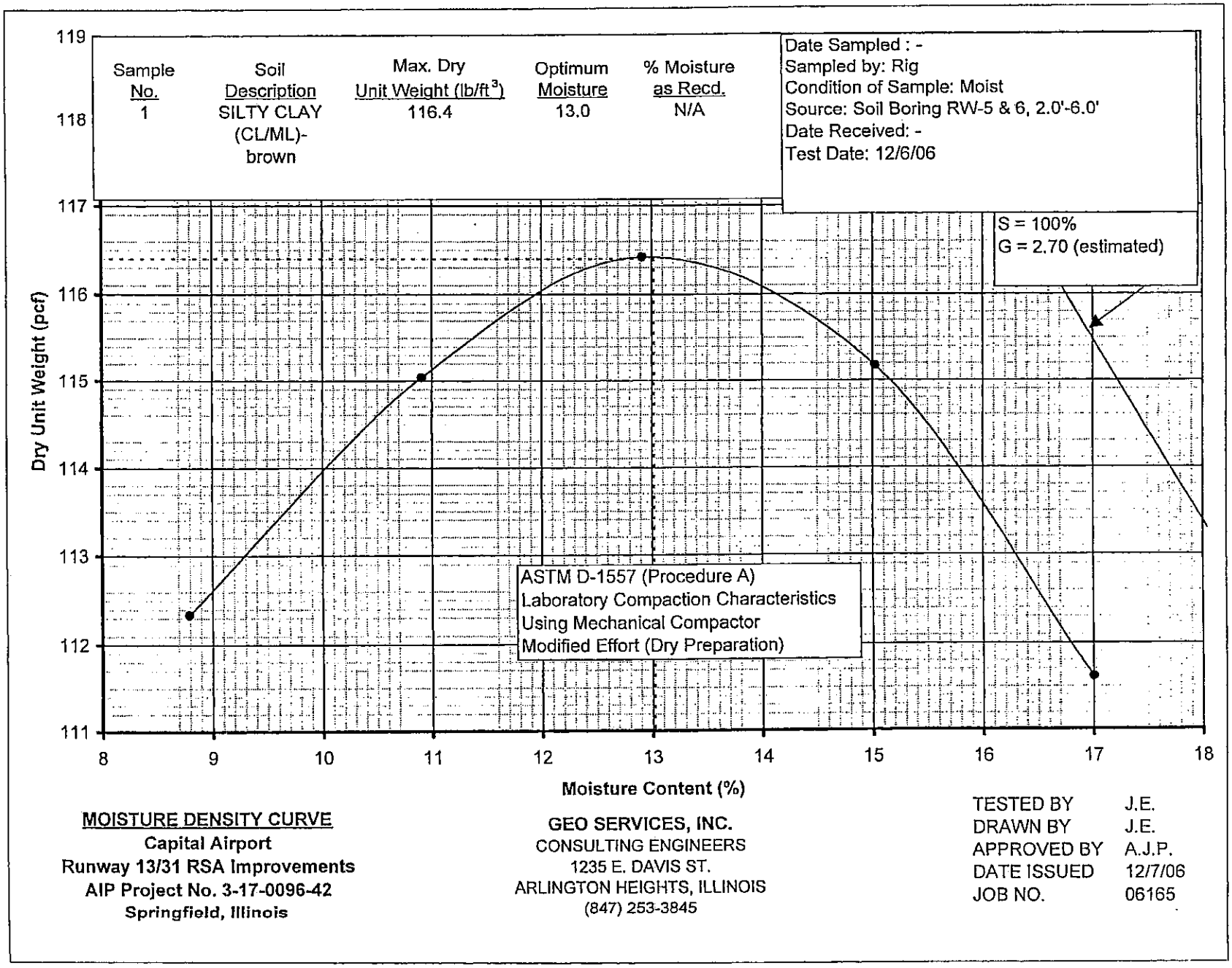




MOISTURE DENSITY CURVE
Capital Airport
Runway 13/31 RSA Improvements
AIP Project No. 3-17-0096-42
Springfield, Illinois

GEO SERVICES, INC.
CONSULTING ENGINEERS
1235 E. DAVIS ST.
ARLINGTON HEIGHTS, ILLINOIS
(847) 253-3845

TESTED BY	J.E.
DRAWN BY	J.E.
APPROVED BY	A.J.P.
DATE ISSUED	12/6/06
JOB NO.	06165



MOISTURE DENSITY CURVE
Capital Airport
Runway 13/31 RSA Improvements
AIP Project No. 3-17-0096-42
Springfield, Illinois

GEO SERVICES, INC.
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1235 E. DAVIS ST.
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TESTED BY	J.E.
DRAWN BY	J.E.
APPROVED BY	A.J.P.
DATE ISSUED	12/7/06
JOB NO.	06165

GEO Services, Inc.
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(847) 253-3845 FAX (847) 253-0482

pH of Soils
ASTM D 4972

Project Name Capital Airport Runway 13/31 Job No 06165

Location Springfield, IL Date 2/21/07

Client CMT (AIP Project No. 3-17-0096-42)

Boring No.	RW-1 & 2					
Depth	0' - 1.0'					
pH	7.0					

Tested by DB

GEO Services, Inc.
1235 E. DAVIS STREET
ARLINGTON HEIGHTS, IL 60005
(847) 253-3845 FAXES (847) 253-0482

Organic Matter in Soils by Wet Combustion
AASHTO T 194

Project Name Capital Airport Runway13/31
Location Springfield, IL

Date 2/21/07
Job No 06165

Sample Location	RW-1 & 2							
Sample No	-							
Depth	0' - 1.0'							
Sample Wt. (g)	0.765							
Ferrous Sulfate Solution (ml)	19.1							
Total Organic Matter %	2.2							

Comments: -

Tests Performed by: DB