



## **GREENVILLE-SPARTANBURG INTERNATIONAL AIRPORT**

# **Contract and Technical Specifications for Design and Construction Services for Design-Build Contract for Terminal AHU Replacement Project**

**Bid Documents  
April 2025**

**Prepared By**



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Greenville, SC 29609**

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## BID PROPOSAL

**TO:** Greenville-Spartanburg Airport District

The undersigned BIDDER, in compliance with the request for proposal for design and construction services of the following Project:

### **Design-Build for Terminal AHU Replacement**

BIDDER hereby proposes to furnish all labor, permits, material, machinery, tools, supplies and equipment to faithfully perform all work required for construction of the Project in accordance with the Bidding Documents and issued Addenda within the specified time limitations for the prices in this proposal. **Contractor shall provide a bid proposal form as an attachment to this bid proposal.**

### **ACKNOWLEDGEMENTS BY BIDDER**

- a. By submittal of a proposal, the BIDDER acknowledges and accepts that the quantities established by the OWNER are an approximate estimate of the quantities required to fully complete the Project and that the estimated quantities are principally intended to serve as a basis for evaluation of bids. The BIDDER further acknowledges and accepts that payment under this contract will be made only for actual quantities and that quantities will vary in accordance with the General Contract Provisions subsection entitled "Alteration of Work and Quantities".
- b. The BIDDER acknowledges and accepts that the Bidding Documents are comprised of the documents identified within the Instructions to Bidders. The BIDDER further acknowledges that each of the individual documents that comprise the Bidding Documents are complementary to one another and together establishes the complete terms, conditions and obligations of the successful BIDDER.
- c. As evidence of good faith in submitting this proposal, the undersigned encloses a bid guaranty in the form of a certified check or bid bond in the amount of 5% of the bid price. The BIDDER acknowledges and accepts that refusal or failure to accept award and execute a contract within the terms and conditions established herein will result in forfeiture of the bid guaranty to the owner as a liquidated damage.
- d. The BIDDER acknowledges and accepts the OWNER'S right to reject any or all bids and to waive any minor informality in any Bid or solicitation procedure.
- e. The BIDDER acknowledges and accepts the OWNER'S right to hold all Proposals for purposes of review and evaluation and not issue a notice-of-award for a period of time as outlined in General Contract Provisions Section 30-02.
- f. The undersigned agrees that upon written notice of award of contract, he or she will execute the contract and provide executed payment and performance bonds within the time frame outlined in General Contract Provisions Section 30-06. The undersigned accepts that failure to execute the contract and provide the required bonds within the stated timeframe shall result in forfeiture of the bid guaranty to the owner as a liquidated damage.
- g. Time of Performance: By submittal of this proposal, the undersigned acknowledges and agrees to commence work as outlined in General Contract Provision Section 80-02. The undersigned further agrees to complete the Project within the contract time period, construction scheduling and phasing requirements, and runway closure limitations provided in Special Provisions Section 50.
- h. The undersigned acknowledges and accepts that liquidated damages will be paid to the Owner for failure to comply with the time limitations for runway closures, project phasing, and time of completion as outlined in Special Provision Section 50.
- i. The BIDDER acknowledges that the OWNER has established an overall airport Disadvantaged Business Enterprise goal. An overall DBE goal has been established for the airport, but no specific project goal is included. The Owner supports the use of race neutral measures to facilitate participation by DBE's and other

small businesses. The BIDDER acknowledges and accepts the requirement to apply and document good faith efforts, as defined in Appendix A, 49 CFR Part 26, for subcontracting a portion of the prime contract to certified Disadvantaged Business Enterprises (DBE), as defined in 49 CFR Part 26 for purposes of meeting the OWNER’S established goal. The BIDDER, in complying with this requirement, proposes participation by Disadvantaged Business Enterprises as stated on the attached forms, “Utilization Statement” and “Letter of Intent”

- j. The BIDDER, by submission of a proposal, acknowledges that award of this contract is subject to the provisions of the Davis-Bacon Act. The BIDDER accepts the requirement to pay prevailing wages for each classification and type of worker as established in the attached wage rate determination as issued by the United States Department of Labor. The BIDDER further acknowledges and accepts their requirement to incorporate the provision to pay the established prevailing wages in every subcontract agreement entered into by the Bidder under this project.
- k. Compliance Reports (41 CFR Part 60-1.7): Within 30 days after award of this contract, the Contractor/Subcontractor shall file a compliance report (Standard Form 100) if Contractor/Subcontractor has not submitted a complete compliance report within 12 months preceding the date of award. This report is required if the Contractor/Subcontractor meets all of the following conditions:
  1. Contractors/Subcontractors are not exempt based on 41 CFR 60-1.5.
  2. Has 50 or more employees.
  3. Is a prime contractor or first tier subcontractor.
  4. There is a contract, subcontract, or purchase order amounting to \$50,000 or more
- l. The undersigned acknowledges receipt of the following addenda:

Addendum Number ____ dated ____ / ____ / ____	Received _____
Addendum Number ____ dated ____ / ____ / ____	Received _____
Addendum Number ____ dated ____ / ____ / ____	Received _____

### REPRESENTATIONS BY BIDDER

By submittal of a proposal (bid), the BIDDER represents the following:

- a. The BIDDER has read and thoroughly examined the bid documents including all authorized addenda.
- b. The BIDDER has a complete understanding of the terms and conditions required for the satisfactory performance of project work.
- c. The BIDDER has fully informed themselves of the project site, the project site conditions and the surrounding area.
- d. The BIDDER has familiarized themselves of the requirements of working on an operating airport and understands the conditions that may in any manner affect cost, progress or performance of the work
- e. The BIDDER has correlated their observations with that of the project documents.
- f. The BIDDER has found no errors, conflicts, ambiguities or omissions in the project documents, except as previously submitted in writing to the owner that would affect cost, progress or performance of the work.
- g. The BIDDER is familiar with all applicable Federal, State and local laws, rules and regulations pertaining to execution of the contract and the project work.
- h. The BIDDER has complied with all requirements of these instructions and the associated project documents.

### ATTACHMENTS TO THE BID DOCUMENTS

The following items are attached to and made a part of this Bid:

1. Bid Bond or Guaranty
2. Designation of Subcontractors and Suppliers

3. Completed DBE forms “Utilization Statement” and “Letters of Intent”
4. Evidence of good faith efforts required by 49 CFR Part 26, Appendix A. If project DBE goal is met, submittal of evidence of good faith efforts is not required.
5. Bidder’s Qualification Statement
6. Bid Certifications

### **CERTIFICATION BY BIDDER**

The undersigned hereby declares and certifies that the only parties interested in this bid are named herein and that this bid is made without collusion with any other person, firm or corporation. The undersigned further certifies that no member, officer or agent of the OWNER has direct or indirect financial interest in this bid.

### **SIGNATURE OF BIDDER**

#### **IF AN INDIVIDUAL:**

Name: \_\_\_\_\_

By: \_\_\_\_\_

*(Signature of Individual)*

Doing Business as: \_\_\_\_\_

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

Telephone Number: \_\_\_\_\_

#### **IF A PARTNERSHIP:**

Partnership Name: \_\_\_\_\_

By: \_\_\_\_\_

*(Authorized Signature)*

*(Attach Evidence of Authority to sign as a Partnership)*

Name and Title: \_\_\_\_\_

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

Telephone Number: \_\_\_\_\_

**IF A CORPORATION:**

Corporation Name: \_\_\_\_\_

By: \_\_\_\_\_

*(Authorized Signature)*  
*(Attach Evidence of Authority to sign)*

Name and Title: \_\_\_\_\_

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

(CORPORATE SEAL)

Telephone Number: \_\_\_\_\_

**ATTEST:**

By: \_\_\_\_\_

*(Authorized Signature)*

Name and Title: \_\_\_\_\_

**IF A JOINT VENTURE:** *(Attach copy of Joint Venture Agreement)*

Joint Venture Name: \_\_\_\_\_

By: \_\_\_\_\_

*(Authorized Signature)*  
*(Attach Evidence of Authority to sign)*

Name and Title: \_\_\_\_\_

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

Telephone Number: \_\_\_\_\_

Joint Venture Name: \_\_\_\_\_

By: \_\_\_\_\_

*(Authorized Signature)*  
*(Attach Evidence of Authority to sign)*

Name and Title: \_\_\_\_\_

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

Telephone Number: \_\_\_\_\_



## BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, the undersigned

\_\_\_\_\_ of \_\_\_\_\_, as Principal, and  
\_\_\_\_\_ of \_\_\_\_\_, a corporation organized and existing under  
the laws of the State of \_\_\_\_\_ with its principal office in the City of \_\_\_\_\_, as Surety, are held and firmly bound unto the Greenville-Spartanburg Airport District, as Obligee, in the penal sum of \_\_\_\_\_ (\$ \_\_\_\_\_) for the payment of which, well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Greenville-Spartanburg Airport District a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOW THEREFORE,

- (a) If said bid shall be rejected, or
- (b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in full force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for the value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be affixed hereunto and these presents to be signed by their proper officers, this

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ .

Principal Corporate Seal

\_\_\_\_\_  
(Name of Principal)  
By \_\_\_\_\_  
\_\_\_\_\_  
(Must be President or  
Vice President)  
\_\_\_\_\_  
(Title)

Surety Corporate Seal

\_\_\_\_\_  
(Name of Surety)  
\_\_\_\_\_  
Attorney-in-Fact

**IMPORTANT – Surety executing bonds must be licensed in South Carolina to transact surety insurance. Raised corporate seals must be affixed, a power of attorney must be attached.**

(To Accompany Proposal)

[illegible]

**DISADVANTAGED BUSINESS ENTERPRISE****DBE POLICY**

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR §26.53.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

- m. The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
- n. A description of the work that each DBE firm will perform;
- o. The dollar amount of the participation of each DBE firm listed under (1)
- p. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and
- q. If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26.

**CONTRACT ASSURANCE (§ 26.13)**

The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of Department of Transportation-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 Owner deems appropriate, which may include, but is not limited to:

- 1) Withholding monthly progress payments;
- 2) Assessing sanctions;
- 3) Liquidated damages; and/or
- 4) Disqualifying the Contractor from future bidding as non-responsible.

**PROMPT PAYMENT (§26.29)**

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than ten (10) days from the receipt of each payment the prime contractor receives from the Greenville-Spartanburg Airport District. The prime contractor agrees further to return retainage payments to each subcontractor within ten (10) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Greenville-Spartanburg Airport District. This clause applies to both DBE and non-DBE subcontractors.

**DBE REQUIREMENTS**

The Owner has established a Contract goal of a minimum of **10%** to be performed by a certified Disadvantaged Business Enterprise (DBE). The DBE participation percentages submitted will be a material representation upon which the Owner is relying in making an evaluation for award of this Contract. Bidders are advised that meeting or exceeding DBE subcontract goals or making an acceptable good faith effort to meet such goals are conditions of being awarded this Contract.

### DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION STATEMENT

The undersigned bidder/offeror has satisfied the requirements of the bid specification in the following manner.  
(Please mark the appropriate box)

- ☐ The bidder/offeror is committed to a minimum of \_\_\_\_\_% DBE utilization on this contract.
- ☐ The bidder/offeror, while unable to meet the DBE goal of \_\_\_\_\_%, hereby commits to a minimum of \_\_\_\_\_% DBE utilization on this contract and also submits documentation, as an attachment demonstrating good faith efforts (GFE).

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein have agreed to perform a commercially useful function in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Civil Right Staff of the Federal Aviation Administration.

\_\_\_\_\_  
Bidder's/Offeror's Firm Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

### DBE UTILIZATION SUMMARY

	<u>Contract Amount</u>	<u>DBE Amount</u>	<u>Contract Percentage</u>
DBE Prime Contractor	\$ _____ x 1.00 =	\$ _____	_____ %
DBE Subcontractor	\$ _____ x 1.00 =	\$ _____	_____ %
DBE Supplier	\$ _____ x 0.60 =	\$ _____	_____ %
DBE Manufacturer	\$ _____ x 1.00 =	\$ _____	_____ %
Total Amount DBE		\$ _____	_____ %
DBE Goal		\$ _____	_____ %

\* If the total proposed DBE participation is less than the established DBE goal, Bidder must provide written documentation of the good faith efforts as required by 49 CFR Part 26.

**LETTER OF INTENT****Disadvantage Business Enterprise**

(This page shall be submitted for each DBE firm)

Bidder/Offer: Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

DBE Firm: DBE Firm: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

DBE Contact Person: \_\_\_\_\_ Name: Phone: (\_\_\_\_) \_\_\_\_\_

DBE Certifying Agency: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

*Each DBE Firm shall submit evidence (such as a photocopy) of their certification status.*

**Classification:** ☐ Prime Contractor ☐ Subcontractor ☐ Joint Venture  
☐ Manufacturer ☐ Supplier

Work item(s) to be performed by DBE	Description of Work Item	Quantity	Total

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

DBE contract amount: \$ \_\_\_\_\_ Percent of total contract: % \_\_\_\_\_

**AFFIRMATION:**

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: \_\_\_\_\_  
(Signature) (Title)

**\* In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.**

### BIDDERS LIST

All firms bidding or quoting on subcontracts for this  
DOT-assisted project are listed below.

<u>Firm Name</u>	<u>Address</u>	<u>Certified DBE (Y or N)</u>	<u>Age of Firm</u>	<u>*GRS</u>

Note: This form is not necessary if the recipient establishes a bidders list using another methodology (e.g., statistically sound survey of firms, widely disseminated request of firms to report information to the recipient, etc.) as defined in the recipient's DBE plan.

\*GRS – Annual Gross Receipts

Enter 1 for less than \$1 million

Enter 2 for more than \$1 million, less than \$5 million

Enter 3 for more than \$5 million, less than \$10 million

Enter 4 for more than \$10 million, less than \$15 million

Enter 5 for more than \$15 million

## CONTRACTOR'S GOOD FAITH EFFORTS

### Demonstration of good faith efforts

The obligation of the bidder/offeror is to make good faith efforts. The bidder/offeror can demonstrate that it has done so either by meeting the contract goal or documenting good faith efforts.

The following personnel are responsible for determining whether a bidder/offeror who has not met the contract goal has documented sufficient good faith efforts to be regarded as responsible:

We will ensure that all information is complete and accurate and adequately documents the bidder/offeror's good faith efforts before we commit to the performance of the contract by the bidder/offeror.

### 49 CFR Part 26

In order to be considered responsible and responsive, bidders must make good faith efforts to meet the identified project goal. This may be accomplished in one of two ways:

1. By meeting the goal and documenting the commitments of the DBE firms;
2. By documenting their good faith efforts in the case that the proposed goal is not met.

Good faith efforts means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal. It is up to the grant recipient to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for the Sponsor to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made.

The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements.

### Appendix A

Guidance pertaining to good faith efforts is provided in Appendix A to 49 CFR Part 26. In general, the bidder must demonstrate that they have taken all necessary and reasonable steps to achieve the identified DBE goal. The bidder should adequately document all such efforts, including contacts of DBE firms that are not interested.

The determination of what qualifies as a good faith effort is not quantitatively defined by the regulation. Appendix A does identify some actions, which could be considered as good faith efforts but does not mandate such actions. We encourage Sponsors to incorporate language similar to the following within their Instructions to Bidders:

Good Faith Efforts Bidder must demonstrate that they made good faith efforts to achieve participation with DBE firms. This requires that the bidder show that it took all necessary and reasonable steps to secure participation by certified DBE firms. Mere pro forma efforts will not be considered as a good faith effort.

Actions constituting evidence of good faith efforts are described in appendix A to 49 CFR Part 26. Such actions include but are not limited to:

- └ Soliciting DBE participation through all reasonable and available means. This may include public advertisements and phone calls/faxes to known certified DBE firms.
- └ Consult State Department of Transportation office to obtain a list of certified DBE firms.



## BIDDER'S QUALIFICATION STATEMENT

**SUBMITTED BY:**

Name: \_\_\_\_\_  
(Print or Type Name of Bidder)

(A Corporation / A Partnership / An Individual / A Joint Venture)  
(Bidder to strike out non-applicable terms)

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Contractors South Carolina License No. \_\_\_\_\_

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter.

(Note: Attach Separate Sheets as Required)

1. How many years has your organization been in business as a Contractor? \_\_\_\_\_
2. How many years has your organization been in business under its present name? \_\_\_\_\_
3. If a corporation, answer the following: \_\_\_\_\_
  - 3.1 Date of incorporation: \_\_\_\_\_
  - 3.2 State of incorporation: \_\_\_\_\_
  - 3.3 President's name: \_\_\_\_\_
  - 3.4 Vice president's name(s): \_\_\_\_\_
  - 3.5 Secretary's or Clerk's name: \_\_\_\_\_
  - 3.6 Treasurer's name: \_\_\_\_\_
4. If individual or partnership, answer the following:
  - 4.1 Date of organization: \_\_\_\_\_
  - 4.2 Name and address of all partners. (State whether general or limited partnership):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. If other than corporation or partnership, describe organization and name principals:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Has any construction contract to which you have been a party been terminated by the owner; have you ever terminated a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf; has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? If the answer to any portion of this question is "yes", please furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.

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7. Has any officer or partner of your organization ever been an officer or partner of another organization that had any construction contract terminated by the owner; terminated work on a project prior to its completion for any reason; had any surety which issued a performance bond complete the work in its own name or financed such completion; or had any surety expend any monies in connection with a contract for which they furnished a bond? If the answer to any portion of this question is "yes", please furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.

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8. List name and construction experience of the principal individuals of your organization.

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9. List the states and categories of construction in which your organization is legally qualified to do business.

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10. List name, address and telephone number of an individual who represents each of the following and whom OWNER may contact for a financial reference:

- 10.1 A surety\_\_\_\_\_
- 10.2 A bank:\_\_\_\_\_
- 10.3 A major potential supplier:\_\_\_\_\_

11. Attach a financial statement, prepared on an accrual basis, in a form which clearly indicates Bidder's assets, liabilities and net worth.

11.1 Date of financial statement \_\_\_\_\_

11.2 Name of firm preparing statement: \_\_\_\_\_

12. Attach separately, in an organized manner, the experience requirements for Prime Contractor and Subcontractors, as listed under the Instructions to Bidders and General Provision Section 20-02.

this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

*(Print or Type Name of Bidder)*

By: \_\_\_\_\_

Title: \_\_\_\_\_

(Seal, if corporation)

**BIDDER COMPLIANCE STATEMENT/CERTIFICATION  
REGARDING EQUAL EMPLOYMENT OPPORTUNITY**

The Bidder shall complete the following statement by checking the appropriate boxes.

The Bidder has \_\_\_\_ has not \_\_\_\_ participated in a previous Contract subject to the equal opportunity clause prescribed by Executive Order 110925, or Executive Order 11114, or Executive Order 11246, as amended, of September 24, 1965.

The Bidder has \_\_\_\_ has not \_\_\_\_ submitted all compliance reports in connection with any such Contract due under this applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed Subcontractors will be obtained prior to award of subcontracts.

If the Bidder has participated in a previous Contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Bidder shall submit a compliance report on Standard Form 100, "Employee Information Report EEO-1" prior to the award of the Contract.

NOTE: Failure to complete the blanks may be grounds for rejecting the bid.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
(Name of Bidder)

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Name of Title Signing Official)

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

**RESTRICTIONS ON FEDERAL PUBLIC WORKS PROJECTS**

**GENERAL:** This clause implements provisions contained in the Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law No. 100-223.

**RESTRICTIONS ON CONTRACT AWARD:** No contract will be awarded to a bidder (1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms, published by the United States Trade Representative (USTR) or (2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or (3) who incorporates in the project any product of a foreign country on such USTR list; unless a waiver to these restrictions is granted by the President of the United States or the Secretary of Transportation. (Notice of the granting of a waiver will be published in the Federal Register.)

**CERTIFICATION:** By signing this page the bidder certifies that with respect to this solicitation, and any resultant contract the bidder:

1. is \_\_\_\_\_ is not \_\_\_\_\_ a contractor of a foreign country included on the USTR list;
2. has \_\_\_\_\_ has not \_\_\_\_\_ entered into any contract with a subcontractor of a foreign country included on the USTR list;
3. has \_\_\_\_\_ has not \_\_\_\_\_ entered into any contract for any product to be used on this project that is produced in a foreign country included on the USTR list.

The bidder may rely upon the certification of a prospective subcontractor for the above conditions, unless the bidder has knowledge that the certification is erroneous.

**ERRONEOUS CERTIFICATION:** This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the bidder knowingly rendered an erroneous certification, the sponsor may cancel this contract for default at no cost to the sponsor.

**SUBCONTRACTS:** The bidder shall incorporate this clause, without modification, including this paragraph (f) in all solicitations and subcontracts under this contract.

**APPLICABILITY OF 18 U.S.C. 1001:** This certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# **BUY AMERICA CERTIFICATION**

(Title 49 U.S.C. Section 50101)

<b>PROJECT NAME:</b>	Design-Build for Terminal AHU Replacement
<b>AIRPORT NAME:</b>	Greenville-Spartanburg International Airport
<b>AIP NUMBER:</b>	TBD

This solicitation and any resulting contract are subject to the Buy America requirements of 49 U.S.C. Section 50101. The bidder certifies it and all associated subcontractors will comply with the Buy American preferences established under Title 49 U.S.C. Section 50101 as follows:

## **U.S.C. Section 50101 - Buying goods produced in the United States**

- (a) Preference. - The Secretary of Transportation may obligate an amount that may be appropriated to carry out section 106(k), 44502(a)(2), or 44509, subchapter I of chapter 471 (except section 47127), or chapter 481 (except sections 48102(e), 48106, 48107, and 48110) of this title for a project only if steel and manufactured goods used in the project are produced in the United States.
- (b) Waiver. - The Secretary may waive subsection (a) of this section if the Secretary finds that -
  - (1) Applying subsection (a) would be inconsistent with the public interest;
  - (2) The steel and goods produced in the United States are not produced in a sufficient and reasonably available amount or are not of a satisfactory quality;
  - (3) When procuring a facility or equipment under section 44502(a)(2) or 44509, subchapter I of chapter 471 (except section 47127), or chapter 481 (except sections 48102(e), 48106, 48107, and 48110) of this title -
    - A. The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components of the facility or equipment; and
    - B. Final assembly of the facility or equipment has occurred in the United States; or
  - (4) Including domestic material will increase the cost of the overall project by more than 25 percent.
- (c) Labor Costs. - In this section, labor costs involved in final assembly are not included in calculating the cost of components.

\* \* \* \* \*

As a matter of bid responsiveness, the bidder or offeror must complete and submit this certification with their bid proposal. The bidder must sign and date the certification. The bidder/offeror must indicate how they propose to comply with the Buy America provision by selecting one of the following certification statements.

- ☐ **The bidder hereby certifies that it will comply with Title 49 U.S.C Section 50101(a) by only installing steel and manufactured products produced in the United States of America. The bidder further agrees that if chosen as the apparent low bid, it will submit documentation to the owner that demonstrate all steel and manufactured products are 100% manufactured in the United States.**
- ☐ **The bidder hereby certifies that it cannot fully comply with the Buy America preferences of Title 49 U.S.C Section 50101(a); bidder therefore requests a waiver per Title 49 U.S.C Section 50101(b) subject to the following conditions:**
  - For equipment and material the FAA has already issued a waiver to AIP Buy American preferences as indicated on the current FAA Buy American conformance list, bidder shall submit a listing of specific equipment and material it proposes to install on the project prior to the issuance of a Notice-to-Proceed.
  - For equipment and material the FAA has not previously issued a waiver to Buy American preferences, the bidder identified with the apparent low bid agrees to prepare and submit to the owner a waiver request and component calculation information within 15 calendar days of the date of the notice of apparent award of contract.

\_\_\_\_\_  
*Bidder's Firm Name*

\_\_\_\_\_  
*Title*

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Date*

## CERTIFICATION OF NON-SEGREGATED FACILITIES - 41 CFR PART 60

### Notice to Prospective Federally Assisted Construction Contractors

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a federally-assisted construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause.
2. Contractors receiving federally-assisted construction contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause. NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

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

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a subcontract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity Clause.
2. Contractors receiving subcontract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause. NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

## CERTIFICATION OF NON-SEGREGATED FACILITIES

The federally-assisted construction contractor certifies that they do not maintain or provide, for their employees, any segregated facilities at any of their establishments and that they do not permit their employees to perform their services at any location, under their control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that they will not maintain or provide, for their employees, segregated facilities at any of their establishments and that they will not permit their employees to perform their services at any location under their control where segregated facilities are maintained. The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where they have obtained identical certifications from proposed subcontractors for specific time periods) they will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that they will retain such certifications in their files.

Certification – The information above is true and complete to the best of my knowledge and belief

\_\_\_\_\_  
*Name of Signer (Please Print)*

\_\_\_\_\_  
*Title*

\_\_\_\_\_  
*Signature of Contractor*

\_\_\_\_\_  
*Date*

**CERTIFICATION REGARDING DEBARMENT AND SUSPENSION (NON-PROCUREMENT) –  
TITLE 2 CFR PART 180 & TITLE 2 CFR PART 1200**

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

**CERTIFICATION REGARDING DEBARMENT AND SUSPENSION (NON-PROCUREMENT) –  
TITLE 2 CFR PART 1200 AND TITLE 2 CFR PART 180, SUBPART C**

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

- i. Checking the System for Award Management at website: <http://www.sam.gov>
- ii. Collecting a certification statement similar to paragraph (a)
- iii. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that an individual failed to tell a higher tier that they were excluded or disqualified at the time they entered the covered transaction with that person, the FAA may pursue any available remedy, including suspension and debarment.

\_\_\_\_\_  
*Name of Signer (Please Print)*

\_\_\_\_\_  
*Title*

\_\_\_\_\_  
*Signature of Contractor*

\_\_\_\_\_  
*Date*



# **NONCOLLUSIVE BIDDING CERTIFICATION**

STATE OF SOUTH CAROLINA  
COUNTY OF SPARTANBURG

I, \_\_\_\_\_ of the City of \_\_\_\_\_, in the  
County of \_\_\_\_\_ and the State of \_\_\_\_\_, of full age,  
being duly sworn according to the law on my oath depose and say that:

I am \_\_\_\_\_ a, \_\_\_\_\_  
(Name) (Title, Position, Etc.)

of the firm of \_\_\_\_\_,

the Bidder making the bid for the proposed project as described in this set of contract documents, and that I executed the said Bid with full authority so to do; that said Bidder has not, 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 above named Project; and that all statements contained in said Bid and in this affidavit are true and correct, and made with full knowledge that the Owner relies upon the truth of the statements contained in said Bid and in the statements contained in this affidavit is awarding the Contract for the said Project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such Contract upon an agreement of understanding, for a commission, percentage, brokerage or contingent fee, except bonafide employees or bonafide established commercial or selling agencies maintained by:

\_\_\_\_\_  
(Signature of Bidder)

\_\_\_\_\_  
(Printed or Typed Name of Bidder)

SEAL (if corporation)

Sworn to before me this \_\_\_\_ day of, \_\_\_\_\_, in the County of \_\_\_\_\_,  
State of \_\_\_\_\_.

\_\_\_\_\_  
(Notary Public)

## CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) COMPLIANCE CERTIFICATION

I hereby certify that as a Bidder for this project, I have reviewed and am fully aware of the requirements as provided in the Construction Safety and Phasing Plan (CSPP). By submitting this bid proposal, I assure the Owner that, I the Prime Contractor, and all Sub-Contractors shall follow and meet all construction safety operational requirements provided for in the project documents and specifically the CSPP.

It is understood that the CSPP is subject to FAA review and approval. Adjustments to the CSPP may be required by the FAA.

It is understood that I, the Prime Contractor, shall be required to submit a Safety Plan Compliance Document (SCPD) prior to the Notice-to-Proceed for construction and that the SPCD shall include supplemental information that could not be determined prior to the time of bid. It is further understood that the SPCD shall include additional information not addressed in the CSPP that I, the Prime Contractor, has determined is required to satisfactorily execute the project.

In addition, any construction practice proposed by the contractor that does not conform to the approved CSPP or SPCD, which may impact the airport's operational safety, will require a revision to the CSPP and SPCD. It is known that any and all revisions to these documents are subject to re-coordination with and approval from airport operations and the FAA in advance of the revised operation.

The CSPP and the SPCD shall meet the requirements outlined under FAA Advisory Circular 150/5370-2G, *Operational Safety on Airports During Construction*. Safety Operational concerns the Bidder has determined need to be addressed in the SPCD shall be submitted on company letterhead and provided with this certification and the bid submittal.

\_\_\_\_\_  
(Authorized Representative) Date: \_\_\_\_\_

\_\_\_\_\_  
(Authorized Signature) Date: \_\_\_\_\_

\_\_\_\_\_  
(Firm's Name)

\_\_\_\_\_  
(Title)

**NOTICE OF INTENT TO AWARD**

THIS CONTRACT AWARD made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by the Greenville-Spartanburg Airport District, hereinafter called the OWNER, to \_\_\_\_\_

herein after called the CONTRACTOR, is for the completion of a certain project described as: Design-Build for the Terminal AHU Replacement for the use and benefit of the Owner as shown on the plans and described in the specifications as prepared by:

McFarland Johnson, Inc.  
330 East Coffee St., Suite 5000  
Greenville, SC 29601

The project consists of the following Schedules:

The consideration to be paid by the Owner to the Contractor for completion of the project in accordance with the contract documents is the sum of \_\_\_\_\_

\_\_\_\_\_ Dollars \$ \_\_\_\_\_

Commencement of work under this contract shall begin in accordance with General Contract Provisions 80-02 and the project is to be fully completed within the contract duration outlined in Special Contract Provisions Section 60 unless otherwise subsequently agreed.

OWNER: the Greenville-Spartanburg Airport District

CONTRACTOR: Acknowledgement of Receipt

By: \_\_\_\_\_  
Name

By: \_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**SECTION 00 52 00**

**STANDARD FORM OF AGREEMENT**

**Architect to purchase AIA A141-2014 for project and insert into Appendix as PDF.  
Update Table of Contents Appendix.**

Refer to Appendix for AIA A141-2014, Standard Form of Agreement Between Owner and Design-Builder..

THIS DOCUMENT IN ITS ENTIRETY IS HEREBY DECLARED A PART OF THESE CONTRACT DOCUMENTS.

**END OF SECTION**

KNOW ALL PERSONS BY THESE PRESENTS:

Whenever Contractor shall be, and declared by Owner to be in default under the CONTRACT, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the CONTRACT in accordance with its terms and conditions, and
2. Shall save the Owner harmless from any claims, judgments, or liens arising from the Surety's failure to either remedy the default or to complete the CONTRACT in accordance with its terms and conditions in a timely manner.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the successors of Owner.

**NOTE: Applicable sections of attached acknowledgements must be completed as part of bond.**

**ACKNOWLEDGMENTS****Acknowledgment by Principal if Individual or Partnership**

1. STATE OF \_\_\_\_\_
2. County of \_\_\_\_\_ to-wit:
3. I, \_\_\_\_\_, a Notary Public in and for the
4. county and state aforesaid, do hereby certify that \_\_\_\_\_
5. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ whose name is signed to the foregoing writing, has this day acknowledged the same before me in my said county.
6. Notary Seal
7. \_\_\_\_\_  
(Notary Public)
8. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

**Acknowledgment by Principal if Corporation**

9. STATE OF \_\_\_\_\_
10. County of \_\_\_\_\_ to-wit:
11. I, \_\_\_\_\_, a Notary Public in and for the
12. county and state aforesaid, do hereby certify that \_\_\_\_\_
13. who as, \_\_\_\_\_ signed the foregoing writing for 14.  
\_\_\_\_\_ a corporation, has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
15. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_
16. Notary Seal
17. \_\_\_\_\_  
(Notary Public)
18. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

**Acknowledgment by Surety**

19. STATE OF \_\_\_\_\_
20. County of \_\_\_\_\_ to-wit:
21. I, \_\_\_\_\_, a Notary Public in and for the
22. county and state aforesaid, do hereby certify that \_\_\_\_\_
23. who as, \_\_\_\_\_ signed the foregoing writing for 24.  
\_\_\_\_\_ a corporation, has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
25. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_
26. Notary Seal
27. \_\_\_\_\_  
(Notary Public)
28. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

**LABOR AND MATERIAL PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS:

That \_\_\_\_\_  
(Contractor name, complete address and legal title)  
as Principal, hereinafter called Contractor, and \_\_\_\_\_  
(Surety name and complete address)  
\_\_\_\_\_ a corporation organized and existing under the laws of the State of \_\_\_\_\_,  
with its principal office in the City of \_\_\_\_\_, as Surety, hereinafter called Surety, are held firmly  
bound unto the **Greenville-Spartanburg Airport District**, as Obligee, hereinafter call Owner, in the amount of  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment whereof Principal and Surety bind  
themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these  
presents.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_ entered into  
contract with Owner for \_\_\_\_\_  
\_\_\_\_\_ in accordance with drawings and specifications prepared by \_\_\_\_\_  
\_\_\_\_\_

which contract is by reference made a part hereof, and is hereafter referred to as the CONTRACT.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall, well and truly  
perform the contract, and shall pay off, satisfy and discharge all claims of subcontractors, labors, materialmen and all  
persons furnishing material or doing work pursuant to the CONTRACT and shall save Owner and its property harmless  
from any and all liability over and above the contract price thereof, between the Owner and the Contractor, for all of  
such labor and material, and shall fully pay off and discharge and secure the release of any and all mechanics liens  
which may be placed upon said property by any such subcontractor, laborer or materialmen, then this obligation shall be  
null and void. Otherwise, it shall remain in full force and effect.

Signed and sealed this \* \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Principal Raised Corporate Seal (MUST BE AFFIXED)

\_\_\_\_\_ (Seal)

(Contractor Name)

By \_\_\_\_\_ (Seal)

(Must be President, Vice President, Owner,  
Partner, manager or Member)

(Title)

Surety Raised Corporate Seal (MUST BE AFFIXED)

(Surety)

**NOTE: Raised corporate seals are mandatory.**

BY: \_\_\_\_\_ (Seal)

**Please attach Power of Attorney.****NOTE: Applicable sections of attached  
acknowledgements must be completed as part of bond.****\*Power of Attorney must be certified on this  
date or later.**

**ACKNOWLEDGMENTS****Acknowledgment by Principal if Individual or Partnership**

1. STATE OF \_\_\_\_\_
2. County of \_\_\_\_\_ to-wit:
3. I, \_\_\_\_\_, a Notary Public in and for the
4. county and state aforesaid, do hereby certify that \_\_\_\_\_
5. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ whose name is signed to the foregoing writing, has this day acknowledged the same before me in my said county.
6. Notary Seal
7. \_\_\_\_\_  
(Notary Public)
8. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

**Acknowledgment by Principal if Corporation**

9. STATE OF \_\_\_\_\_
10. County of \_\_\_\_\_ to-wit:
11. I, \_\_\_\_\_, a Notary Public in and for the
12. county and state aforesaid, do hereby certify that \_\_\_\_\_
13. who as, \_\_\_\_\_ signed the foregoing writing for
14. \_\_\_\_\_ a corporation,
- has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
15. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_
16. Notary Seal
17. \_\_\_\_\_  
(Notary Public)
18. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

**Acknowledgment by Surety**

19. STATE OF \_\_\_\_\_
20. County of \_\_\_\_\_ to-wit:
21. I, \_\_\_\_\_, a Notary Public in and for the
22. county and state aforesaid, do hereby certify that \_\_\_\_\_
23. who as, \_\_\_\_\_ signed the foregoing writing for
24. \_\_\_\_\_ a corporation,
- has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
25. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_
26. Notary Seal
27. \_\_\_\_\_  
(Notary Public)
28. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_



**CERTIFICATE OF INSURANCE**

Without limiting any liabilities or any other obligation of Contractor, the Contractor shall purchase and maintain, and cause its subcontractors to purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction of the State of South Carolina and, unless otherwise required in the Contract Documents, rated at least "A Minus" or better in the current A.M. Best ratings, the minimum insurance coverage set forth below which shall be maintained to protect against claims related to the Work or the Contractor's operations under the Contract and for which the Contractor may be legally liable.

**WORKMAN'S AND OCCUPATION DISEASE COMPENSATION**

\$100,000 each person and \$500,000 aggregate

**COMMERCIAL GENERAL LIABILITY**

\$5,000,000 each Occurrence and \$5,000,000 General Aggregate limit.  
Products/Completed Operations Aggregate of at least \$1,000,000  
Personal and Advertising Injury Limit of \$1,000,000.

**BUSINESS AUTOMOBILE LIABILITY**

\$2,000,000 combined single limit for bodily injury and property damage

**ADDITIONAL UMBRELLA LIABILITY**

\$5,000,000 for each Occurrence and \$5,000,000 Aggregate Limit

Project Name \_\_\_\_\_

Contractor \_\_\_\_\_

Signature \_\_\_\_\_

Insurer \_\_\_\_\_

Policy No(s). \_\_\_\_\_ Expiration Date \_\_\_\_\_

**NOTICE TO PROCEED**

TO: \_\_\_\_\_

DATE: \_\_\_\_\_

\_\_\_\_\_

PROJECT:

\_\_\_\_\_

\_\_\_\_\_

You are hereby notified to commence work on \_\_\_\_\_, 20\_\_\_\_ in accordance with the Agreement dated \_\_\_\_\_. And WORK within **<Insert days>** from the project start date established as set forth herein above.

The Greenville-Spartanburg Airport District

By: \_\_\_\_\_

(Signature)

\_\_\_\_\_

(Printed Name)

\_\_\_\_\_

(Title)

## ACCEPTANCE OF NOTICE:

Receipt of the above NOTICE TO PROCEED  
is hereby acknowledged by:

\_\_\_\_\_

this \_\_\_\_ day of \_\_\_\_\_,

20 \_\_\_\_\_,

By: \_\_\_\_\_

(Signature)

\_\_\_\_\_

(Printed Name)

\_\_\_\_\_

(Title)

**APPLICATION AND CERTIFICATE FOR PAYMENT**

PROJECT TITLE \_\_\_\_\_ PROJECT NO. \_\_\_\_\_

CONSULTANT: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

Application No. \_\_\_\_\_ Period From: \_\_\_\_\_ To: \_\_\_\_\_

Application is made for payment, as shown below, and on the attached Construction Progress Estimate Form, in accordance with the Contract Documents:

Original Contract Price: \$ \_\_\_\_\_

Approved Change Orders and Dates:

_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

Adjusted Contract Price \$ \_\_\_\_\_

Total Amount Due to Date  
(from attached Construction Progress Estimate) \$ \_\_\_\_\_

Retainage: \_\_\_\_\_ \$ \_\_\_\_\_

Total Earned Less Retainage \$ \_\_\_\_\_

Less Previous Certificates for Payment \$ \_\_\_\_\_

Currently Payment Due \$ \_\_\_\_\_

Notice to Proceed \_\_\_\_\_

Date of Completion \_\_\_\_\_

Time Used \_\_\_\_\_

% complete \_\_\_\_\_ %

Contractor's Certification

The undersigned Contractor certifies that the work covered by this Application for Payment has been completed in accordance with the Contract Documents that all amounts have been paid by them for work for which previous Certificates for Payment were issued and payments received from the Owner, that the current payment shown is that due. The contractor also certifies that the attached DBE Participation Progress Report is true and accurate.

CONTRACTOR

By \_\_\_\_\_

Date \_\_\_\_\_

Engineer's Certification

The Engineer has reviewed this application, accompanying data and schedules and having made on-site observation of the work consistent with their assigned responsibilities certifies that to their best knowledge and belief, the quality of the work performed is in accordance with the Contract Documents, that the work has progressed as indicated herein, and that the Contractor is entitled payment to the amount above shown.

CONSULTANT

By \_\_\_\_\_

Date \_\_\_\_\_

**CERTIFICATE OF SUBSTANTIAL COMPLETION****GREENVILLE-SPARTANBURG INTERNATIONAL AIRPORT  
GREER, SOUTH CAROLINA****PROJECT: Design-Build for Terminal AHU Replacement Project****DESCRIPTION: Removal and replacement of 10 existing air handler units in the terminal building.****OWNER/SPONSOR: Greenville-Spartanburg Airport District****CONTRACTOR: <INSERT CONTRACTOR>****CONTRACT DATE: <Insert Date>**

This certificate of Substantial Completion applies to Work under the Contract Documents.

**TO: Greenville-Spartanburg Airport District**  
(OWNER/SPONSOR)**AND TO: <Insert Contractor Name>**  
(CONTRACTOR)

The Work to which this certificate applies has been observed by authorized representatives of the OWNER, and CONTRACTOR, and that work is hereby declared to be substantially complete in accordance with the Contract Documents on:

**<Insert Date>**  
Date of Substantial Completion

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive. The failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list, Exhibit A, shall be completed or corrected by CONTRACTOR as expeditiously as possible.

The following documents are attached to and made a part of this certificate:

1. Exhibit "A" - Tentative List of Items to be Corrected or Completed (consisting of one page).

This certificate does not constitute an acceptance of Work not in accordance with the contract documents, nor is it a release of CONTRACTOR'S obligation to complete the Work in accordance with the Contract Documents.

**CONTRACTOR  
ACCEPTANCE:**

**<Insert Contractor>**

By: \_\_\_\_\_

\_\_\_\_\_  
Date

**OWNER  
ACCEPTANCE:**

**GSP AIRPORT DISTRICT**

By: \_\_\_\_\_

\_\_\_\_\_  
Date

**RESIDENT  
PROJECT  
REPRESENTATIVE  
ACCEPTANCE:**

**<Insert RPR>**

By: \_\_\_\_\_

\_\_\_\_\_  
Date

**ENGINEER OF  
RECORD  
ACCEPTANCE:**

**<Insert Engineer>**

By: \_\_\_\_\_

\_\_\_\_\_  
Date

**Exhibit “A” - Tentative List of Items to be Corrected  
or Completed**

<b>Item No.</b>	<b>Description</b>
1	
2	
3	
4	
5	
6	
7	
8	

**End of List**

## CERTIFICATE OF COMPLETION

(To be completed by Contractor)

I hereby certify that all goods and/or services required by the **GREENVILLE-SPARTANBURG AIRPORT DISTRICT** have been delivered in accordance with the contract documents and bid specifications, and all activities required by the contractor under the contract have been completed as of \_\_\_\_\_  
\_\_\_\_\_ (Date).

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

Principal: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)



**CONTRACTOR'S AFFIDAVIT REGARDING  
SETTLEMENT OF CLAIMS**

This is to certify that all lawful claims for materials, rental of equipment and labor used in connection with the construction of the above project, whether by subcontractor or claimant in person, have been duly discharged.

The undersigned, for the consideration of \$\_\_\_\_\_, as set out in the final pay estimate, as full and complete payment under the terms of the contract, hereby waives and relinquishes any and all further claims or right of lien under, in connection with, or as a result of the above described project. The undersigned further agrees to indemnify and save harmless GREENVILLE-SPARTANBURG AIRPORT DISTRICT, their employees, agents or representatives, against any and all liens, claims of liens, suits, actions, damages, charges and expenses whatsoever, which said Owner and Engineer may suffer arising out of the failure or the undersigned to pay for all labor performances and materials furnished for the performance of said installation.

Signed and dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

By:\_\_\_\_\_

STATE OF SOUTH CAROLINA

COUNTY OF SPARTANBURG

The foregoing instrument was subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
(Notary Public)

\_\_\_\_\_  
(My Commission Expires)

**CONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT**

**PROJECT NAME:** Design-Build for Terminal AHU Replacement

Upon receipt by undersigned of a check from Greenville-Spartanburg Airport District in the sum of \$ \_\_\_\_\_ payable to \_\_\_\_\_ and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's liens, stop notice or bond rights that the undersigned has on said Project.

LIEN CLAIMANT (Company Name): \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

FEDERAL ID #: \_\_\_\_\_

TELEPHONE #: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

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

My Commission Expires: \_\_\_\_\_

**CONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT****PROJECT NAME:** Design-Build for Terminal AHU Replacement

Upon receipt by undersigned of a check from Greenville-Spartanburg Airport District in the sum of \$ \_\_\_\_\_ payable to \_\_\_\_\_ and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's liens, stop notice or bond rights that the undersigned has on said Project for the following extent. This release covers a progress payment for labor, services, equipment, or material furnished through \_\_\_\_\_ only, and does not cover any retention retained before or after the release date, extras furnished before the release date for which payment has not been received; extras or items furnished after said date.

Rights based upon work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any mechanic's lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right of the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment. Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.

LIEN CLAIMANT (Company Name): \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

FEDERAL ID #: \_\_\_\_\_

TELEPHONE #: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

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

My Commission Expires: \_\_\_\_\_

# AIRPORT IMPROVEMENT PROGRAM

## CONTRACT PROVISIONS

### A1 ACCESS TO RECORDS AND REPORTS

#### A1.1 SOURCE

2 CFR § 200.334

2 CFR § 200.337

FAA Order 5100.38

#### A1.2 APPLICABILITY

2 CFR § 200.334 requires a Sponsor to retain records pertinent to a Federal award for a period of three years from submission of final closure documents. 2 CFR § 200.337 establishes that Sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the Sponsor's contracts and subcontracts of AIP funded projects.

**Contract Types** – The Sponsor must include this provision in all contracts and subcontracts of AIP funded projects.

**Use of Provision** – No mandatory language provided. The following language is acceptable to the FAA with meeting the intent of this requirement. If the Sponsor prefers to use different language, the Sponsor's language must fully satisfy the requirements of 2 CFR §§ 200.334 and 200.337.

#### A1.3 MODEL CONTRACT CLAUSE

##### ACCESS TO RECORDS AND REPORTS

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

## A2 AFFIRMATIVE ACTION REQUIREMENT

### A2.1 SOURCE

41 CFR Part 60-4

Executive Order 11246

### A2.2 APPLICABILITY

**Minority Participation.** Sponsors are required to set goals for minority participation in AIP funded projects exceeding \$10,000. The goals for minority participation derive from Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/3/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

To find the goals for minority participation, a Sponsor must either refer to the Federal Register Notice or to the Department of Labor online document, "[Participation Goals for Minorities and Females](#)". EAs and SMSAs span state boundaries. A Sponsor may have to refer to entries for adjacent states in order to locate the goal for the project location.

**Female Participation.** Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction projects. This value remains constant for all counties and states.

#### Contract Types –

*Construction* – The Sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed \$10,000. Construction work means construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection and other onsite functions incidental to the actual construction.

*Equipment* – The Sponsor must incorporate this notice in any equipment project exceeding \$10,000 that involves installation of equipment onsite (e.g., electrical vault equipment). This provision does not apply to equipment acquisition projects where the manufacture of the equipment takes place offsite at a manufacturer's plant (e.g., firefighting and snow removal vehicles).

*Professional Services* – The Sponsor must incorporate this notice in any professional service agreement if the professional services agreement includes tasks that meet the definition of construction work [as defined by the U.S. Department of Labor (DOL)] and exceeds \$10,000. Examples include installation of monitoring systems (e.g., noise, environmental, etc.).

*Property/Land* – The Sponsor must incorporate this notice in any agreement associated with land acquisition if the agreement includes construction work (defined above) that exceeds \$10,000. Examples include demolition of structures or installation of boundary fencing.

**Use of Provision – MANDATORY TEXT.** The Sponsor must:

- (a) Incorporate the text of this provision in its solicitations without modification.
- (b) Incorporate the applicable minority participation goal and the covered area by geographic name.
- (c) Not simply insert a reference to the 1980 Federal Register Notice.

## **A2.3 MANDATORY SOLICITATION CLAUSE**

### **NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY**

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:

#### **Timetables**

Goals for minority participation for each trade: **10%**

Goals for female participation in each trade: **6.9%**

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

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

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

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is **South Carolina, Greenville County, Spartanburg County, City of Greer.**

### A3 BREACH OF CONTRACT TERMS

#### A3.1 SOURCE

2 CFR Part 200, Appendix II(A)

#### A3.2 APPLICABILITY

This provision requires Sponsors to incorporate administrative, contractual or legal remedies in the event that a contractor violates or breaches contract terms. The Sponsor must also include appropriate sanctions and penalties.

**Contract Types** – This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR Part 200, Appendix II (A). This threshold is occasionally adjusted for inflation and is \$250,000.

**Use of Provision** – No mandatory language provided. The following language is acceptable to the FAA as meeting the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of 2 CFR Part 200. Select either "contractor" or "consultant" as applicable.

#### A3.3 MODEL CONTRACT CLAUSE

##### BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the *Contractor* or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide *Contractor* written notice that describes the nature of the breach and corrective actions the *Contractor* must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the *Contractor* must correct the breach. Owner may proceed with termination of the contract if the *Contractor* fails to correct the breach by the deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

## **A4 BUY AMERICAN PREFERENCE**

### **A4.1 SOURCE**

Title 49 USC § 50101

Executive Order 14005, *Ensuring the Future is Made in All of America by All of America's Workers*

Bipartisan Infrastructure Law (Pub. L. No. 117-58), Build America, Buy America (BABA)

### **A4.2 APPLICABILITY**

The Buy American Preference incorporates statutory requirements and policies outlined in the in 49 USC § 50101, Executive Order 14005, and BABA.

Section 50101 of 49 USC requires that all steel and manufactured goods used on AIP projects be produced in the United States. This section also gives the FAA the ability to issue a waiver to a Sponsor to use non-domestic material on an AIP funded project subject to meeting certain conditions. A Sponsor may request that the FAA issue a waiver from the Buy American Preference requirements if the FAA finds that:

- 1) Applying the provision is not in the public interest.
- 2) The steel or manufactured goods are not available in sufficient quantity or quality in the United States.
- 3) The cost of components and subcomponents produced in the United States is more than 60 percent of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number (such as specific airport lighting equipment) are considered the equipment.
- 4) Applying this provision would increase the cost of the overall project by more than 25 percent.

Executive Order 14005 advances the Administration's priority to use terms and conditions of Federal financial assistance awards to maximize the use of goods, products, and materials produced in, and services offered in, the United States. The Order directs, to the extent appropriate and consistent with applicable law, agencies shall partner with the Hollings Manufacturing Extension Partnership (MEP) to conduct supplier scouting in order to identify American companies that are able to produce goods, products, and materials in the United States that meet Federal procurement needs, prior to consideration of using non-domestic products.

The Bipartisan Infrastructure Law, Build America, Buy America (BABA) Act strengthens Made in America Laws and bolsters America's industrial base, protects national security, and supports high-paying jobs. Under BABA, iron, steel and certain construction materials are required to be 100% produced in the United States.

Under the Bipartisan Infrastructure Law (Pub. L. No. 117-58) BABA three waivers are available for iron and steel, manufactured products, and construction materials when a Federal agency finds that –

- 1) Applying the domestic content procurement preference would be inconsistent with the public interest (a "public interest waiver");



- 2) Types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (a “nonavailability waiver”); or
- 3) The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent (an “unreasonable cost waiver”).

BABA defines construction materials, items that are or consists primarily of non-ferrous metals, plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables), glass (including optic glass), lumber or drywall.

Items that consist of two or more of the aforementioned materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials. For example, a plastic framed sliding window should be treated as a manufactured product while plate glass should be treated as a construction material.

The Buy America Preference requirements flow down from the Sponsor to first tier contractors, who are responsible for ensuring that lower tier contractors and subcontractors are also in compliance.

**Note:** The Buy American Preference does not apply to temporary equipment a contractor uses as a tool of its trade and which does not remain as part of the project.

### Required Documentation

**The FAA Buy American Requests.** All applications (requests) for an FAA Buy American Preference Waiver includes, at minimum, a completed Content Percentage Worksheet and Final Assembly Questionnaire. Additional information may be requested from the applicant by the FAA. Airport Sponsors, consultants, construction contractors, or equipment manufacturers are responsible for completing and submitting waiver applications. The FAA is unable to make a determination on waiver requests with incomplete information. Sponsors must confirm with the bidder or offeror to assess the adequacy of the waiver request and associated information prior to forwarding a waiver request to the FAA for action. All FAA waivers forms are available from the FAA Buy American Requirements webpage.

**Proprietary Confidentiality.** Exemption 4 of the Freedom of Information Act protects "trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential. Proprietary manufacturing and design information submitted to the Federal Aviation Administration for the purposes of receiving a Buy American Waiver shall not be disclosed outside the FAA. The FAA will provide a written notification to the Airport Sponsor, manufacturer(s), contractor(s) or supplier(s) when a waiver determination is complete.

**Timing of Waiver Requests.** Sponsors desiring a Type 2 waiver should submit their waiver request, with justification, *before* issuing a solicitation for bids or a request for proposal for a project.

The Sponsor must submit a Type 2, Type 3, or Type 4 waiver request *prior* to executing the contract. The FAA will generally not consider waiver requests after execution of the contract except where extraordinary and extenuating circumstances exist.

**The Buy American Notice of Determination (NOD) Process.** The FAA Reauthorization Act of 2018 requires that all approved waivers must be posted to the FAA’s website and remain posted for public comment for 10 days, before becoming effective. All FAA waivers must complete the NOD process. Sponsors are encouraged to wait until approved waivers become effective before executing AIP projects.

**Buy American Conformance Lists.** The FAA Office of Airports maintains listings of projects and products that have received a waiver from the Buy American Preference requirements for project specific and nationwide use. Each of these conformance lists is available online at [www.faa.gov/airports/aip/buy\\_american/](http://www.faa.gov/airports/aip/buy_american/). Products listed on the FAA Nationwide Buy American Conformance list do not require additional submittal of domestic content information. Nationwide waivers expire five years from the date issued, unless revoked earlier by the FAA.

**Facility Waiver Requests.** For construction of a facility, the Sponsor may submit the waiver request after bid opening, but prior to contract execution. Examples of facility construction include terminal buildings, terminal renovation, and snow removal equipment buildings.

#### **Contract Types –**

*Construction and Equipment* – The Sponsor must meet the Buy American Preference requirements of 49 USC § 50101 and BABA for all AIP funded projects that require materials that are or consists primarily of iron, steel or manufactured goods and construction materials.

*Professional Services* – Professional service agreements (PSAs) do not normally result in a deliverable that meets the definition of a manufactured product. However, the emergence of various project delivery methods has created situations where task deliverables under a PSA may include a manufactured product. If a PSA includes providing a manufactured good as a deliverable under the contract, the Sponsor must include the Buy American Preference provision in the agreement.

*Property* – Most land transactions do not involve acquiring a manufactured product. However, under certain circumstances, a property acquisition project could result in the installation of a manufactured product. For example, the installation of property fencing, gates, doors and locks, etc. represent manufactured products acquired under an AIP funded land project that must comply with Buy American Preferences.

**Use of Provisions** – No mandatory language provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor’s revised language must fully comply with 49 USC § 50101 and BABA.

There are two types of FAA Buy American certifications. The Sponsor must incorporate the appropriate certifications of compliance with FAA Buy American Preference in the solicitation:

- **Construction Projects** involving the replacement, rehabilitation, reconstruction of airfield surfaces such as on runways, taxiways, taxilanes, aprons, roadways, parking lots, etc. – Insert the Certificate of compliance to FAA Buy American Preference based on Construction Projects.

- **Equipment and Buildings Projects** involving and including the acquisition of equipment such as snow removal equipment, navigational aids, wind cones, and the construction of buildings such as hangars, terminal development, lighting vaults, aircraft rescue & firefighting buildings, etc. - Insert the Certificate of Compliance with FAA Buy American Preference Based on Equipment/Building Projects.

#### **A4.3 MODEL SOLICITATION CLAUSES**

##### **A4.3.1 Certification of Compliance with FAA Buy American Preference Statement**

###### **FAA BUY AMERICAN PREFERENCE**

The Contractor certifies that its bid/offer is in compliance with 49 USC § 50101, BABA and other related Made in America Laws,<sup>1</sup> U.S. statutes, guidance, and FAA policies, which provide that Federal funds may not be obligated unless all iron, steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

The bidder or offeror must complete and submit the certification of compliance with FAA’s Buy American Preference, BABA and Made in America laws included herein with their bid or offer. The Airport Sponsor/Owner will reject as nonresponsive any bid or offer that does not include a completed certification of compliance with FAA’s Buy American Preference and BABA.

The bidder or offeror certifies that all constructions materials, defined to mean an article, material, or supply other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall used in the project are manufactured in the U.S.

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<sup>1</sup> Per Executive Order 14005 “Made in America Laws” means all statutes, regulations, rules, and Executive Orders relating to federal financial assistance awards or federal procurement, including those that refer to “Buy America” or “Buy American,” that require, or provide a preference for, the purchase or acquisition of goods, products, or materials produced in the United States, including iron, steel, and manufactured products offered in the United States.

### **A4.3.2 Certification of Compliance with FAA Buy American Preference – Construction Projects**

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with its proposal. The bidder or offeror must indicate how it intends to comply with 49 USC § 50101, BABA and other related Made in America Laws, U.S. statutes, guidance, and FAA policies, by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e., not both) by inserting a checkmark (✓) or the letter “X”.

- ☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101, BABA and other related U.S. statutes, guidance, and policies of the FAA by:
- a) Only installing iron, steel and manufactured products produced in the United States;
  - b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.
  - c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
  - d) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

- a) To provide to the Airport Sponsor or the FAA evidence that documents the source and origin of the iron, steel, and/or manufactured product.
  - b) To faithfully comply with providing U.S. domestic products.
  - c) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
  - d) Certify that all construction materials used in the project are manufactured in the U.S.
- ☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:
- a) To submit to the Airport Sponsor or FAA within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.
  - b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.
  - c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.

- d) To furnish U.S. domestic product for any waiver request that the FAA rejects.
- e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

### **Required Documentation**

**Type 2 Waiver (Nonavailability)** - The iron, steel, manufactured goods or construction materials or manufactured goods are not available in sufficient quantity or quality in the United States. The required documentation for the Nonavailability waiver is

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire
- b) Record of thorough market research, consideration where appropriate of qualifying alternate items, products, or materials including;
- c) A description of the market research activities and methods used to identify domestically manufactured items capable of satisfying the requirement, including the timing of the research and conclusions reached on the availability of sources.

**Type 3 Waiver** – The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the “facility/project.” The required documentation for a Type 3 waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
- b) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
- c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
- d) Percentage of non-domestic component and subcomponent cost as compared to total “facility” component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

**Type 4 Waiver (Unreasonable Costs)** - Applying this provision for iron, steel, manufactured goods or construction materials would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

- a) A completed Content Percentage Worksheet and Final Assembly Questionnaire from
- b) At minimum two comparable equal bids and/or offers;
- c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
- d) Completed waiver applications for each comparable bid and/or offer.

**False Statements:** Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Title

### **A4.3.3 Certification of Compliance with FAA Buy American Preference – Equipment/Building Projects**

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101, and other Made in America Laws, U.S. statutes, guidance, and FAA policies by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter “X”.

- ☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101, BABA and other related U.S. statutes, guidance, and policies of the FAA by:
- a) Only installing steel and manufactured products produced in the United States;
  - b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.
  - c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
  - d) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

- a) To provide to the Airport Sponsor or FAA evidence that documents the source and origin of the steel and manufactured product.
  - b) To faithfully comply with providing U.S. domestic product.
  - c) To furnish U.S. domestic product for any waiver request that the FAA rejects.
  - d) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
- ☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:
- a) To submit to the Airport Sponsor or FAA within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.
  - b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.
  - c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.

- d) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

### **Required Documentation**

**Type 2 Waiver (Nonavailability)** - The iron, steel, manufactured goods or construction materials are not available in sufficient quantity or quality in the United States. The required documentation for the Nonavailability waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire
- b) Record of thorough market research, consideration where appropriate of qualifying alternate items, products, or materials including;
- c) A description of the market research activities and methods used to identify domestically manufactured items capable of satisfying the requirement, including the timing of the research and conclusions reached on the availability of sources.

**Type 3 Waiver** – The cost of the item components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the “item”. The required documentation for a Type 3 waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
- b) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108 (products of unknown origin must be considered as non-domestic products in their entirety).
- c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
- d) Percentage of non-domestic component and subcomponent cost as compared to total “item” component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

**Type 4 Waiver (Unreasonable Costs)** - Applying this provision for iron, steel, manufactured goods or construction materials, would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

- a) Completed Content Percentage Worksheet and Final Assembly Questionnaire from
- b) At minimum two comparable equal bidders and/or offerors;
- c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
- d) Completed waiver applications for each comparable bid and/or offer.



**False Statements:** Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Title

## A5 CIVIL RIGHTS - GENERAL

### A5.1 SOURCE

49 USC § 47123

### A5.2 APPLICABILITY

There are two separate civil rights provisions that apply to projects:

1. FAA General Civil Rights Provision and,
2. Title VI provisions, which are addressed in Appendix A6.

**Contract Types** – The General Civil Rights Provisions found in 49 USC § 47123, derived from the Airport and Airway Improvement Act of 1982, Section 520, apply to all Sponsor contracts *regardless* of funding source.

**Use of Provision – MANDATORY TEXT.** Each contract must include two civil rights provisions. The first general clause must be included in all contracts, lease agreements, or transfer agreements. An additional specific provision must be included; the applicable text is based on whether the contract is a general contract or whether the contract is a lease or transfer agreement. The Sponsor must incorporate the text of the appropriate general clause and specific clause without modification into the contract, lease, or transfer agreement.

The required clauses for each type of contact are summarized in the table below:

Contract Clause	The Sponsor must include the contract clause in:	Clause Text is Included in Paragraph
Clause that is used for all contracts, lease agreements and transfer agreements	Every contract or agreement <b>regardless of funding source.</b>	A5.3.1
Clause that is used for general contract agreements	This applies to all contracts that do not involve property agreements. It applies to all contracts not covered by A5.3.3 <b>regardless of funding source.</b>	A5.3.2
Clause that is used for lease agreements and transfer agreements	This applies to all property agreements such leases of concession space in a terminal and leases where a physical portion of the airport is transferred for use. It applies to all contracts not covered by A5.3.2 <b>regardless of funding source.</b>	A5.3.3

**A5.3 MANDATORY CONTRACT CLAUSES****A5.3.1 General Clause that is used for Contracts, Lease Agreements, and Transfer Agreements****GENERAL CIVIL RIGHTS PROVISIONS**

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

**A5.3.2 Specific Clause that is used for General Contract Agreements**

The above provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract.

**A5.3.3 Specific Clause that is used for Lease Agreements or Transfer Agreements**

If the Contractor transfers its obligation to another, the transferee is obligated in the same manner as the Contractor.

The above provision obligates the Contractor for the period during which the property is owned, used or possessed by the Contractor and the airport remains obligated to the Federal Aviation Administration.

## A6 CIVIL RIGHTS – TITLE VI ASSURANCE

### A6.1 SOURCE

49 USC § 47123

FAA Order 1400.11

### A6.2 APPLICABILITY

Title VI of the Civil Rights Act of 1964, as amended, (Title VI) prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The text of each individual clause comes from the U.S. Department of Transportation [Order DOT 1050.2](#), Standard Title VI Assurances and Nondiscrimination Provisions, effective April 24, 2013. These assurances require that the Recipient (the Sponsor) insert the appropriate clauses in the form provided by the DOT. Where the clause refers to the applicable activity, project, or program, it means the AIP project.

The clauses are as follows:

#### A6.2.1 Applicability of Title VI Solicitation Notice

Contract Clause	The Sponsor must include the contract clause in:	Clause Text is Included in Paragraph
<p>Title VI Solicitation Notice –</p> <ul style="list-style-type: none"> <li>Assurance 2 of the DOT Standard Title VI Assurances and Nondiscrimination Clauses</li> <li>Assurance 30(d) of the Airport Sponsors Assurances</li> </ul>	<p>1) All AIP funded solicitations for bids, requests for proposals, or any work subject to Title VI regulations; and</p> <p>2) All Sponsor proposals for negotiated agreements <b>regardless of funding source.</b></p>	A6.3.1
<p>Title VI Clauses for Compliance with Nondiscrimination Requirements</p> <ul style="list-style-type: none"> <li>Assurance 3 of the DOT Standard Title VI Assurances and Nondiscrimination Clauses</li> <li>Assurance 30(e)(1) of the Airport Sponsor Assurances</li> </ul>	<p>Every contract or agreement (unless the Sponsor has determined, and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities, which is a rare occurrence).</p> <p>It has been determined that service contracts with utility companies that are not already subject to substantively identical nondiscrimination requirements must include this clause.</p>	A6.4.2

Contract Clause	The Sponsor must include the contract clause in:	Clause Text is Included in Paragraph
<p>Title VI Required Clause for Property Interests Transferred from the United States</p> <ul style="list-style-type: none"> <li>Assurance 4 of the DOT Standard Title VI Assurances and Nondiscrimination Clauses</li> <li>Assurance 30e.3 of the Airport Sponsor Assurances</li> </ul>	<p>As a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Sponsor.</p> <p>This is a rare occurrence, and it will be the responsibility of the United States government to include the clause in the contract.</p>	<p>A6.4.3</p>
<p>Title VI Required Clause for Transfer of Real Property Acquired or Improved Under the Activity, Facility or Program –</p> <ul style="list-style-type: none"> <li>Assurance 5 of the DOT Standard Title VI Assurances and Nondiscrimination Clauses</li> <li>Assurance 30(e)(4)(a) of the Airport Sponsor Assurances</li> </ul>	<p>As a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Sponsor with other parties for all transfers of real property acquired or improved under Airport Improvement Program</p> <p>This applies to agreements such as leases where a physical portion of the airport is transferred for use, for example a fuel farm, apron space, or a parking facility. It applies to agreements not covered by A6.4.4.</p>	<p>A6.4.4</p>
<p>Clause for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program</p> <ul style="list-style-type: none"> <li>Assurance 6 of the DOT Standard Title VI Assurances and Nondiscrimination Clauses</li> <li>Assurance 30(e)(4)(b) of the Airport Sponsor Assurances</li> </ul>	<p>In any future (deeds, leases, licenses, permits, or similar instruments) entered into by the Sponsor with other parties for the construction or use of, or access to, space on, over, or under real property acquired or improved under Airport Improvement Program</p> <p>This applies to agreements such as leases of concession space in a terminal not covered by A6.4.3.</p>	<p>A6.4.5</p>

Contract Clause	The Sponsor must include the contract clause in:	Clause Text is Included in Paragraph
<p>Title VI List of Pertinent Nondiscrimination Acts and Authorities</p> <ul style="list-style-type: none"> <li>Assurance 3 of the DOT Standard Title VI Assurances and Nondiscrimination Clauses</li> <li>Assurance 30(e)(2) of the Airport Sponsor Assurances</li> </ul>	<p>Insert this list in every contract or agreement, unless the Sponsor has determined, and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities, which is a rare occurrence.</p> <p><b>This list can only be omitted if the FAA has determined that the contractor or company is already subject to substantively identical nondiscrimination requirements.</b></p>	<p>A6.4.1</p> <p><b>List must be included in all applicable contracts.</b></p>

### A6.3 MANDATORY SOLICITATION CLAUSE

**The Sponsor must include this clause in:**

- 1) All AIP funded solicitations for bids, requests for proposals, or any work subject to Title VI regulations; and
- 2) All Sponsor proposals for negotiated agreements **regardless of funding source.**

#### A6.3.1 Title VI Solicitation Notice

**Title VI Solicitation Notice:**

The **(Name of Sponsor)**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, [select businesses, or disadvantaged business enterprises or airport concession disadvantaged business enterprises] will be afforded full and fair opportunity to submit bids in response to this invitation and no businesses will be discriminated against on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in consideration for an award.

### A6.4 MANDATORY CONTRACT CLAUSES

#### A6.4.1 Title VI List of Pertinent Nondiscrimination Acts and Authorities

Insert this list in every contract or agreement, unless the Sponsor has determined and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities. This list can be omitted if the FAA has determined that the contractor or company is already subject to nondiscrimination requirements, which is a rare occurrence.

#### Title VI List of Pertinent Nondiscrimination Acts and Authorities

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

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq.*, 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-Assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq.*), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq.*) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-259) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990 (42 USC § 12101, *et seq.*) (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations);
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs [70 Fed. Reg. 74087 (2005)];
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC § 1681, *et seq.*).

#### **A6.4.2      Nondiscrimination Requirements/Title VI Clauses for Compliance**

The Sponsor must include this contract clause in:

- 1) Every contract or agreement (unless the Sponsor has determined, and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities); and
- 2) Service contracts with utility companies that are not already subject to substantively identical nondiscrimination requirements.
- 3) Other types of contracts with utility companies involving property covered by A6.4.2, A6.4.3, or A6.4.4.

### **Compliance with Nondiscrimination Requirements:**

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

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor’s obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a Contractor’s noncompliance with the non-discrimination provisions of this contract, the Sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
  - a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
  - b. Cancelling, terminating, or suspending a contract, in whole or in part.



6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

#### **A6.4.3 Title VI Clauses for Deeds Transferring United States Property**

This is a rare occurrence, and it will be the responsibility of the United States government to include the clause in the contract. It will be included as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Sponsor.

#### **CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY**

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

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

**(HABENDUM CLAUSE)**

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

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

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

**A6.4.4 Title VI Clauses for Transfer of Real Property  
Acquired or Improved Under the Activity, Facility,  
or Program**

This applies to agreements such as leases where a physical portion of the airport is transferred for use—for example a fuel farm, apron space, or a parking facility—and will be included as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Sponsor with other parties for all transfers of real property acquired or improved under the Airport Improvement Program.

**CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE  
AIRPORT IMPROVEMENT PROGRAM**

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

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add “as a covenant running with the land”] that:
  1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a Federal Aviation Administration activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee,

licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Nondiscrimination Acts and Regulations listed in the Title VI List of Pertinent Nondiscrimination Acts and Authorities (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, (*Title of Sponsor*) will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.\*
- C. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the (*Title of Sponsor*) will have the right to enter or re-enter the lands and facilities thereon, and the above-described lands and facilities will there upon revert to and vest in and become the absolute property of the (*Title of Sponsor*) and its assigns.\*

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

#### **A6.4.5 Title VI Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program**

This applies to agreements such as leases of concession space in a terminal and any future deeds, leases, licenses, permits, or similar instruments entered into by the Sponsor with other parties for the construction or use of, or access to, space on, over, or under real property acquired or improved under the Airport Improvement Program.

#### **CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM**

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

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, “as a covenant running with the land”) that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Title VI List of Pertinent Nondiscrimination Acts and Authorities.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, (*Title of Sponsor*) will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities

thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.\*

- C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, (***Title of Sponsor***) will there upon revert to and vest in and become the absolute property of (***Title of Sponsor***) and its assigns.\*

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

**A7 CLEAN AIR AND WATER POLLUTION CONTROL****A7.1 SOURCE**

2 CFR Part 200, Appendix II(G)

42 USC § 7401, et seq

33 USC § 1251, et seq

**A7.2 APPLICABILITY**

**Contract Types** – This provision is required for all contracts and lower tier contracts that exceed \$150,000.

**Use of Provision** – No mandatory language provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of Appendix II to 2 CFR § 200.

**A7.3 MODEL CONTRACT CLAUSE****CLEAN AIR AND WATER POLLUTION CONTROL**

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC §§ 7401-7671q) and the Federal Water Pollution Control Act as amended (33 USC §§ 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceed \$150,000.

## **A8 CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS**

### **A8.1 SOURCE**

2 CFR Part 200, Appendix II(E)

2 CFR § 5.5(b)

40 USC § 3702

40 USC § 3704

### **A8.2 APPLICABILITY**

Contract Work Hours and Safety Standards Act Requirements (CWHSSA) (40 USC §§ 3702 & 3704) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts not less than one and one-half times their basic rate of pay for all hours worked over 40 in a workweek. CWHSSA prohibits unsanitary, hazardous, or dangerous working conditions on federally-assisted projects. The Wage and Hour Division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL's Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements.

#### **Contract Types –**

*Construction* – This provision applies to all contracts and lower tier contracts that exceed \$100,000, and employ laborers, mechanics, watchmen, and guards.

*Equipment* – This provision applies to any equipment project exceeding \$100,000 that involves installation of equipment onsite (e.g., electrical vault equipment). This provision does not apply to equipment acquisition projects where the manufacture of the equipment takes place offsite at the vendor plant (e.g., ARFF and SRE vehicles).

*Professional Services* – This provision applies to professional service agreements that exceed \$100,000 and employs laborers, mechanics, watchmen, and guards. This includes members of survey crews and exploratory drilling operations.

*Property* – While most land transactions do not involve employment of laborers, mechanics, watchmen, and guards, under certain circumstances, a property acquisition project could require such employment. Examples include the installation of property fencing or testing for environmental contamination

**Use of Provision – MANDATORY TEXT.** Sponsors must incorporate this text without modification.

## **A8.3 MANDATORY CONTRACT CLAUSE**

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

#### **1. Overtime Requirements.**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

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

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of \$29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

#### **3. Withholding for Unpaid Wages and Liquidated Damages.**

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

#### **4. Subcontractors.**

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

## **A9 COPELAND “ANTI-KICKBACK” ACT**

### **A9.1 SOURCE**

2 CFR Part 200, Appendix II(D)

29 CFR Parts 3 and 5

### **A9.2 APPLICABILITY and PURPOSE**

The Copeland (Anti-Kickback) Act (18 USC § 874 and 40 USC § 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

#### **Contract Types –**

*Construction* – This provision applies to all construction contracts and subcontracts financed under the AIP that exceed \$2,000.

*Equipment* – This provision applies to all equipment installation projects (e.g., electrical vault improvements) financed under the AIP that exceed \$2,000. This provision does not apply to equipment acquisitions where the equipment is manufactured at the vendor’s plant (e.g., SRE and ARFF vehicles).

*Professional Services* –The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) include tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds \$2,000, the PSA must incorporate the Copeland Anti-kickback provision.

*Property* –Ordinarily, land acquisition projects would not involve employment of laborers or mechanics and thus the Copeland Anti-Kickback provision would not apply. However, land projects that involve installation of boundary fencing and demolition of structures would involve laborers and mechanics. The Sponsor must include this provision if the land acquisition project involves employment of laborers or mechanics for a contract exceeding \$2,000.

**Use of Provision** – No mandatory language provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor’s language must fully satisfy the requirements of 29 CFR Part 5.

### **A9.3 MODEL CONTRACT CLAUSE**

#### **COPELAND “ANTI-KICKBACK” ACT**

Contractor must comply with the requirements of the Copeland “Anti-Kickback” Act (18 USC 874 and 40 USC 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and



subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

## **A10 DAVIS-BACON REQUIREMENTS**

### **A10.1 SOURCE**

2 CFR Part 200, Appendix II(D)

29 CFR Part 5

49 USC § 47112(b)

40 USC §§ 3141-3144, 3146, and 3147

### **A10.2 APPLICABILITY**

The Davis-Bacon Act (40 USC §§ 3141-3144, 3146, and 3147) ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

#### **Contract Types –**

*Construction* – Incorporate into all construction contracts and subcontracts that exceed \$2,000 and include funding from the AIP.

*Equipment* – This provision applies to all equipment installation projects (e.g., electrical vault improvements) financed under the AIP that exceed \$ 2,000. This provision does not apply to equipment acquisitions where the equipment is manufactured at the vendor’s plant (e.g., SRE and ARFF vehicles)

*Professional Services* – The emergence of different project delivery methods has created situations where Professional Service Agreements (PSAs) includes tasks that meet the definition of construction, alteration, or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration, or repair and it exceeds \$2,000, the PSA must incorporate this clause.

*Property* – Ordinarily, land acquisition projects would not involve employment of laborers or mechanics and thus the provision would not apply. However, land projects that involve installation of boundary fencing and demolition of structures would involve laborers and mechanics. The Sponsor must include this provision if the land acquisition project involves employment of laborers or mechanics for a contract exceeding \$2,000.

*Fencing Projects* – Fencing projects that exceed \$2,000 must include this provision.

**Use of Provision – MANDATORY TEXT.** 29 CFR part 5 establishes specific language a Sponsor must use. The Sponsor may not make any modification to the standard language. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration, or repair are acting as a contractor. The Sponsor may not substitute the term “Contractor” for “Consultant” in such instances.

## **A10.3 MANDATORY CONTRACT CLAUSE**

### **DAVIS-BACON REQUIREMENTS**

#### **1. Minimum Wages.**

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

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

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

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

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or

disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

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

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

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

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

2. Withholding. The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, Sponsor, Applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

### 3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions

made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

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

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

- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;
- (2) That each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR Part 3;

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

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

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

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

#### 4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman’s hourly rate) specified in the Contractor’s or subcontractor’s registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice’s level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the

applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(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 that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

#### 5. Compliance with Copeland Act Requirements.

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

#### 6. Subcontracts.

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

#### 7. Contract Termination: Debarment.

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

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

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

9. Disputes Concerning Labor Standards.

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

10. Certification of Eligibility.

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

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

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



## **A11 DEBARMENT AND SUSPENSION**

### **A11.1 SOURCE**

2 CFR Part 180 (Subpart B)

2 CFR Part 200, Appendix II(H)

2 CFR Part 1200

DOT Order 4200.5

Executive Orders 12549 and 12689

### **A11.2 APPLICABILITY**

The Sponsor must verify that the firm or individual that it is entering into a contract with is not presently suspended, excluded, or debarred by any Federal department or agency from participating in federally-assisted projects. The Sponsor accomplishes this by:

- 1) Checking the System for Award Management (SAM.gov) to verify that the firm or individual is not listed in SAM.gov as being suspended, debarred, or excluded;
- 2) Collecting a certification from the firm or individual that it is not suspended, debarred, or excluded; and
- 3) Incorporating a clause in the contract that requires lower tier contracts to verify that no suspended, debarred, or excluded firm or individual is included in the project.

**Contract Types** – This requirement applies to *covered transactions*, which are defined in 2 CFR part 180 (Subpart B). AIP funded contracts are non-procurement transactions, as defined by 2 CFR § 180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agent or representative in any transaction, if the amount of the contract is expected to equal or exceed \$25,000. This includes contracts associated with land acquisition projects.

**Use of Provision** – No mandatory language provided. The following language is acceptable to the FAA in meeting the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of 2 CFR part 180. For professional service agreements, Sponsor may substitute "bidder/offeree" with "consultant."

### **A11.3 MODEL BID/PROPOSAL CERTIFICATION CLAUSES**

#### **A11.3.1 Bidder or Offeror Certification**

##### **CERTIFICATION OF OFFEROR/BIDDER REGARDING DEBARMENT**

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

**A11.3.2 Lower Tier Contract Certification****CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT**

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

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

If the Federal Aviation Administration later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

## **A12 DISADVANTAGED BUSINESS ENTERPRISE**

### **A12.1 SOURCE**

49 CFR Part 26

### **A12.2 APPLICABILITY**

A Sponsor that anticipates awarding \$250,000 or more in AIP funded prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (49 CFR § 26.21). The approved DBE program will identify a 3-year overall program goal that the Sponsor bases on the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on the project (49 CFR § 26.45).

**Contract Types** – Sponsors with a DBE program on file with the FAA must include the following provisions, if applicable:

- 1) Clause in all solicitations for proposals for which a contract goal has been established,
- 2) Clause in each prime contract, and
- 3) Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

#### **Use of Provision –**

1. *Solicitations with a DBE Contract Goal* – No mandatory language provided. 49 CFR §26.53 requires a Sponsor's solicitation to address what a contractor must submit on proposed DBE participation. The language of A12.3.1 is acceptable to the FAA in meeting the intent of this requirement. If the Sponsor uses different language, the Sponsor's revised language must fully satisfy these requirements. The Sponsor may require the contractor's submittal on proposed DBE participation either at bid opening as a matter of responsiveness or within five days of bid opening as a matter of responsibility.
2. *Solicitations Relying on Race/Gender Neutral Means* – No mandatory language provided. The language of A12.3.2 is acceptable to the FAA in meeting the intent of this requirement. If the Sponsor uses different language, the Sponsor's revised language must fully satisfy requirements for a Sponsor that is not applying a project specific contract goal but is covered by a DBE program on file with the FAA.
3. *Assurance for Contracts Covered by DBE Program* – **MANDATORY TEXT PROVIDED.** Sponsors must incorporate this language if they have a DBE program on file with the FAA. This includes projects where DBE participation is obtained through race/gender neutral means (i.e., no DBE contract goal). Section 26.13 of 49 CFR establishes mandatory language for contractor assurance. The Sponsor must not modify the language. Part 26 of 49 CFR requires Sponsors ensure this clause also flows down into subcontracts (i.e., must be included verbatim in subcontracts).

4. *Prompt Payment for Contracts Covered by DBE Program* – No mandatory language provided. Section 26.29 of 49 CFR requires Sponsors to include a contract clause requiring prompt payment to subcontractors no later than thirty (30) days after the prime contractor receives payment from the Sponsor. The requirement applies to all subcontractors, not just DBEs. The prompt payment language of A12.3.3 is acceptable to the FAA in meeting the intent of this requirement. If the Sponsor uses different language, such as a specific clause identified in the Sponsor's approved DBE program plan, the Sponsor's revised language must fully satisfy these requirements.
5. *Termination of DBE Subcontractors on Contracts with a DBE Contract Goal* - No mandatory language provided. Section 26.53 of 49 CFR prohibits unauthorized removal or replacement of DBE firms listed in response to a solicitation that had a DBE contract goal and sets forth the specific enforcement mechanism recipients must include in prime contracts. The language of A12.3.3 is acceptable to the FAA in meeting the intent of this requirement.
6. Sponsors that are not required to have a DBE program on file with the FAA are not required to include DBE provisions and clauses.

## **A12.3 REQUIRED PROVISIONS**

### **A12.3.1 Solicitation Language (Solicitations that include a Contract Goal)**

#### Bid Information Submitted as a matter of **responsiveness**:

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.

As a condition of responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

- 1) The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
- 2) A description of the work that each DBE firm will perform;
- 3) The dollar amount of the participation of each DBE firm listed under (1);
- 4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal
- 5) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and
- 6) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

**Bid Information submitted as a matter of responsibility:**

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.

As a condition of responsibility, every Bidder or Offeror must submit the following information on the forms provided herein within five days after bid opening.

- 1) The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
- 2) A description of the work that each DBE firm will perform;
- 3) The dollar amount of the participation of each DBE firm listed under (1);
- 4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal;
- 5) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and
- 6) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

**A12.3.2 Solicitation Language (Race/Gender Neutral Means)**

The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Owner to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

**A12.3.3 Prime Contracts (Contracts Covered by a DBE Program)**

**Contract Assurance (49 CFR § 26.13; mandatory text provided) –**

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 DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- 1) Withholding monthly progress payments;
- 2) Assessing sanctions;
- 3) Liquidated damages; and/or
- 4) Disqualifying the Contractor from future bidding as non-responsible.

**Prompt Payment (49 CFR § 26.29; acceptable/sample text provided) –**

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from the owner. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the owner. This clause applies to both DBE and non-DBE subcontractors.

**Termination of DBE Subcontracts (49 CFR § 26.53(f); acceptable/sample text provided) –**

The prime contractor must not terminate a DBE subcontractor listed in response to paragraph 12.3.1, Solicitation Language (or an approved substitute DBE firm) without prior written consent of the owner. This includes, but is not limited to, instances in which the prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

The prime contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent. Unless the owner's consent is provided, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

[Name of Recipient] may provide such written consent only if the owner agrees, for reasons stated in the concurrence document, that the prime contractor has good cause to terminate the DBE firm. For purposes of this paragraph, good cause includes the circumstances listed in 49 CFR §26.53.

Before transmitting to the owner its request to terminate and/or substitute a DBE subcontractor, the prime contractor must give notice in writing to the DBE subcontractor, with a copy to the owner, of its intent to request to terminate and/or substitute, and the reason for the request.

The prime contractor must give the DBE five days to respond to the prime contractor's notice and advise the owner and the contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the owner should not approve the prime contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the owner may provide a response period shorter than five days.

In addition to post-award terminations, the provisions of this section apply to preaward deletions of or substitutions for DBE firms put forward by offerors in negotiated procurements.

**A13 DISTRACTED DRIVING****A13.1 SOURCE**

Executive Order 13513

DOT Order 3902.10

**A13.2 APPLICABILITY**

The FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

**Contract Types** – Sponsors must insert this provision in all AIP funded contracts that exceed the micro-purchase threshold of 2 CFR § 200.320 (currently set at \$10,000).

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA in meeting the intent of this requirement. If the Sponsor uses different language, the Sponsor’s revised language must fully satisfy these requirements.

**A13.3 MODEL CONTRACT CLAUSE****TEXTING WHEN DRIVING**

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

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$10,000 that involve driving a motor vehicle in performance of work activities associated with the project.

**A14 PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT****A14.1 SOURCE**

2 CFR § 200, Appendix II(K)

2 CFR § 200.216

**A14.2 APPLICABILITY**

Sponsors and subgrant recipients are prohibited from using AIP grant funds to:

- a) Procure or obtain,
- b) Extend or renew a contract to procure or obtain, or
- c) Enter into a contract to procure or obtain certain covered telecommunications equipment.

These restrictions apply to telecommunication equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system or as critical technology as part of any system. Covered telecommunications equipment is equipment produced or provided by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of either).

**Contract Types** – The Sponsor must include this provision in all AIP funded contracts and lower-tier contracts.

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor's revised language must fully satisfy these requirements. Sponsor may substitute "Contractor and subcontractor" with "Consultant and sub-consultant" for professional service agreements.

**A14.3 MODEL CERTIFICATION CLAUSE****PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [Public Law 115-232 § 889(f)(1)].



**A15 DRUG FREE WORKPLACE REQUIREMENTS****A15.1 SOURCE**

49 CFR Part 32

Drug-Free Workplace Act of 1988 (41 USC § 8101-8106, as amended)

**A15.2 APPLICABILITY**

The Drug-Free Workplace Act of 1988 requires some Federal contractors and *all* Federal grantees to agree that they will provide drug-free workplaces as a condition of receiving a contract or grant from a Federal agency. The Act does ***not*** apply to contractors, subcontractors, or subgrantees, although the Federal grantees workplace may be where the contractors, subcontractors, or subgrantees are working.

**Contract Types** – This provision applies to all AIP funded projects, but not to the contracts between the grantee (the Sponsor) and a contractor, subcontractors, suppliers, or subgrantees.

**Use of Provision** – No mandatory or recommended text provided because the requirements do not extend beyond the Sponsor level.

**A15.3 CONTRACT CLAUSE**

None.

## **A16 EQUAL EMPLOYMENT OPPORTUNITY (EEO)**

### **A16.1 SOURCE**

2 CFR Part 200, Appendix II(C)

41 CFR § 60-1.4

41 CFR § 60-4.3

Executive Order 11246

### **A16.2 APPLICABILITY**

The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally-assisted construction contract. There are two provisions — a construction clause and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds \$10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount or the contract.

#### **Contract Types –**

*Construction* – The Sponsor must incorporate contract and specification language in all construction contracts and subcontracts as required above.

*Equipment* – The Sponsor must incorporate contract and specification language into all equipment contracts as required above that involves installation of equipment onsite (e.g., electrical vault equipment). This provision does not apply to equipment acquisition projects where the manufacture of the equipment takes place offsite at the vendor plant (e.g., ARFF and SRE vehicles).

*Professional Services* – The Sponsor must include contract and specification language into all professional service agreements as required above.

*Property* – The Sponsor must include contract and specification language into all land acquisition projects that include work that qualifies as construction work as defined by 41 CFR part 60 as required above. An example is installation of boundary fencing.

**Use of Provision – MANDATORY TEXT.** 41 CFR § 60-1.4 provides the mandatory **contract** language. 41 CFR § 60-4.3 provides the mandatory **specification** language. The Sponsor must incorporate these clauses without modification.

**A16.3 MANDATORY CONTRACT CLAUSE****A16.3.1 EEO Contract Clause****EQUAL OPPORTUNITY CLAUSE**

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

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, 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, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff, or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

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

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under this section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) 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.

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

(7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any such 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 in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The Contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: *Provided*, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

### **A16.3.2 EEO Specification**

#### **STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS**

1. As used in these specifications:

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

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

3. If the Contractor is participating (pursuant to 41 CFR part 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 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical 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 in meeting its goals in each craft during the period specified.

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

6. In order for the 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 onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the

Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

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

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or 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 agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

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

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

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations

such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

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

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

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

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

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

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

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

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

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, 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 specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, 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 employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR part 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 this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).



**A17 FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)****A17.1 SOURCE**

29 USC § 201, et seq

2 CFR § 200.430

**A17.2 APPLICABILITY**

The U.S. Department of Labor (DOL) Wage and Hour Division administers the Fair Labor Standards Act (FLSA). This act prescribes federal standards for basic minimum wage, overtime pay, record keeping, and child labor standards.

**Contract Types** – Per the Department of Labor, all employees of certain enterprises having workers engaged in interstate commerce; producing goods for interstate commerce; or handling, selling, or otherwise working on goods or materials that have been moved in or produced for such commerce by any person are covered by the FLSA.

All consultants, sub-consultants, contractors, and subcontractors employed under this federally assisted project must comply with the FLSA.

*Professional Services* – 29 CFR § 213 exempts employees in a bona fide executive, administrative or professional capacity. Because professional firms employ individuals that are not covered by this exemption, the Sponsor's agreement with a professional services firm must include the FLSA provision.

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of 29 USC § 201, et seq. The Sponsor must select *contractor* or *consultant*, as appropriate for the contract.

**A17.3 MODEL SOLICITATION CLAUSE**

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, et seq, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers.

The *Contractor* has full responsibility to monitor compliance to the referenced statute or regulation. The *Contractor* must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

## **A18 LOBBYING AND INFLUENCING FEDERAL EMPLOYEES**

### **A18.1 SOURCE**

31 USC § 1352 – Byrd Anti-Lobbying Amendment

2 CFR Part 200, Appendix II(I)

49 CFR Part 20, Appendix A

### **A18.2 APPLICABILITY**

Consultants and contractors that apply or bid for an award of \$100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

**Contract Types** – The Sponsor must incorporate this provision into all contracts exceeding \$100,000.

**Use of Provision – MANDATORY TEXT.** Appendix A to 49 CFR Part 20 prescribes language the Sponsor must use. The Sponsor must incorporate this provision without modification.

### **A18.3 MANDATORY CERTIFICATION CLAUSE**

#### **CERTIFICATION REGARDING LOBBYING**

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

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients 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.

## **A19 PROHIBITION OF SEGREGATED FACILITIES**

### **A19.1 SOURCE**

2 CFR Part 200, Appendix II(C)

41 CFR Part 60-1

### **A19.2 APPLICABILITY**

The contractor must comply with the requirements of the EEO clause by ensuring that facilities they provide for employees are free of segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin. This clause must be included in all contracts that include the equal opportunity clause, regardless of the amount of the contract.

**Contract Types** – AIP Sponsors must incorporate the Prohibition of Segregated Facilities clause (41 CFR § 60-1.8) in any contract containing the Equal Employment Opportunity clause of 41 CFR § 60-1.4. This obligation flows down to subcontract and sub-tier purchase orders containing the Equal Employment Opportunity clause.

*Construction* – Construction work means construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

*Equipment* – On site installation of equipment such as airfield lighting control equipment meets the definition of construction and thus this provision would apply. This provision does not apply to equipment projects involving manufacture of the item at a vendor's manufacturing plant. An example would be the manufacture of a SRE or ARFF vehicle.

*Professional Services* – Professional services that include tasks that qualify as construction work as defined by 41 CFR part 60-1. Examples include the installation of noise monitoring equipment.

*Property/Land* – Land acquisition contracts that include tasks that qualify as construction work as defined by 41 CFR part 60-1. Examples include demolition of structures or installation of boundary fencing.

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of 41 CFR Part 60-1.

### **A19.3 MODEL CONTRACT CLAUSE**

#### **PROHIBITION OF SEGREGATED FACILITIES**

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The

Contractor agrees that a breach of this clause is a violation of the Equal Employment Opportunity clause in this contract.

(b) “Segregated facilities,” as used in this clause, 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 that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Employment Opportunity clause of this contract.

**A20 OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970****A20.1 SOURCE**

29 CFR Part 1910

**A20.2 APPLICABILITY**

**Contract Types** – All contracts and subcontracts must comply with the Occupational Safety and Health Act of 1970 (OSH). The U.S. Department of Labor Occupational Safety and Health Administration (OSHA) oversees the workplace health and safety standards wage provisions from OSH.

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of 29 CFR Part 1910.

**A20.3 MODEL CONTRACT CLAUSE**

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

## **A21 PROCUREMENT OF RECOVERED MATERIALS**

### **A21.1 SOURCE**

2 CFR § 200.323

2 CFR Part 200, Appendix II(J)

40 CFR Part 247

42 USC § 6901, et seq (Resource Conservation and Recovery Act (RCRA))

### **A21.2 APPLICABILITY**

Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the Environmental Protection Agency (EPA) guidelines codified at 40 CFR part 247. When acquiring items designated in the guidelines, the Sponsor must procure items that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

**Contract Types** – This provision applies to any contracts that include procurement of products designated in subpart B of 40 CFR part 247 where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000.

*Construction and Equipment* – Include this provision in all construction and equipment projects.

*Professional Services and Property* – Include this provision if the agreement includes procurement of a product that exceeds \$10,000.

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of 2 CFR Part 200.

### **A21.3 MODEL CONTRACT CLAUSE**

#### **PROCUREMENT OF RECOVERED MATERIALS**

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

- 1) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year;  
or
- 2) The contractor has procured \$10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at [www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products](http://www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products).

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

- a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
- b) Fails to meet reasonable contract performance requirements; or
- c) Is only available at an unreasonable price.



## **A22 TAX DELINQUENCY AND FELONY CONVICTIONS**

### **A22.1 SOURCE**

Section 8113 of the Consolidated Appropriations Act, 2022 (Public Law 117-103) and similar provisions in subsequent appropriations acts.

DOT Order 4200.6 – Appropriations Act Requirements for Procurement and Non-Procurement Regarding Tax Delinquency and Felony Convictions

### **A22.2 APPLICABILITY**

The Sponsor must ensure that no funding goes to any contractor who:

- Has been convicted of a Federal felony within the last 24 months; or
- Has any outstanding tax liability for which all judicial and administrative remedies have lapsed or been exhausted.

**Contract Types** – This provision applies to all contracts funded in whole or part with AIP.

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor’s language must fully satisfy the requirements of DOT Order 4200.6.

### **A22.3 MODEL CERTIFICATION CLAUSE**

#### **CERTIFICATION OF OFFEROR/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS**

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

#### **Certifications**

- 1) The applicant represents that it is ( ☐ ) is not ( ☐ ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
- 2) The applicant represents that it is ( ☐ ) is not ( ☐ ) a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

#### **Note**

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the Sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government’s interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify

the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

**Term Definitions**

**Felony conviction:** Felony conviction means a conviction within the preceding twenty four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. Code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 USC § 3559.

**Tax Delinquency:** A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

## **A23 TERMINATION OF CONTRACT**

### **A23.1 SOURCE**

2 CFR Part 200, Appendix II(B)

FAA Advisory Circular 150/5370-10, Section 80-09

### **A23.2 APPLICABILITY**

**Contract Types** – All contracts and subcontracts in excess of \$10,000 must address *termination for cause* and *termination for convenience* by the Sponsor. The provision must address the manner (i.e., notice, opportunity to cure, and effective date) by which the Sponsor’s contract will be affected and the basis for settlement (e.g., incurred expenses, completed work, profit, etc.).

#### **Use of Provision –**

*Termination for Convenience* – No mandatory text provided. The Sponsor must include a clause for termination for convenience. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor’s language must fully satisfy the requirements of Appendix II to 2 CFR § 200.

*Termination for Cause* – No mandatory text provided. The Sponsor must include a clause for termination for cause (includes default). The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor’s language must fully satisfy the requirements of 2 CFR Part 200, Appendix II.

*Equipment, Professional Services, and Property* – No mandatory text provided. The Sponsor may use their established clause language provided that it adequately addresses the intent of 2 CFR Part 200 Appendix II(B), which addresses termination for cause and for convenience.

### **A23.3 MODEL CONTRACT CLAUSES**

#### **A23.3.1 Termination for Convenience**

#### **TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)**

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work, and as directed in the written notice.

5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the Owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

1. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
2. Documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
3. Reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
4. Reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

#### **TERMINATION FOR CONVENIENCE (PROFESSIONAL SERVICES)**

The Owner may, by written notice to the Consultant, terminate this Agreement for its convenience and without cause or default on the part of Consultant. Upon receipt of the notice of termination, except as explicitly directed by the Owner, the Contractor must immediately discontinue all services affected.

Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete.

Owner agrees to make just and equitable compensation to the Consultant for satisfactory work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services.

Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

#### **A23.3.2 Termination for Default**

#### **TERMINATION FOR CAUSE (CONSTRUCTION)**

Section 80-09 of FAA Advisory Circular 150/5370-10 establishes standard language for conditions, rights, and remedies associated with Owner termination of this contract for cause due to default of the Contractor.

#### **TERMINATION FOR CAUSE (EQUIPMENT)**

The Owner may, by written notice of default to the Contractor, terminate all or part of this Contract for cause if the Contractor:

1. Fails to begin the Work under the Contract within the time specified in the Notice- to-Proceed;

2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any Owner approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements; or
6. Becomes insolvent or declares bankruptcy.

If one or more of the stated events occur, the Owner will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the Owner's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within [10] days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the Owner, the Owner has authority to acquire equipment by other procurement action. The Contractor will be liable to the Owner for any excess costs the Owner incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the Owner shall be at the Contract price. The Owner may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the Owner determines to be necessary to protect the Owner against loss because of Contractor default.

Owner will not terminate the Contractor's right to proceed with the work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the Owner determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the Owner issued the termination for the convenience the Owner.

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

#### **TERMINATION FOR CAUSE (PROFESSIONAL SERVICES)**

Either party may terminate this Agreement for cause if the other party fails to fulfill its obligations that are essential to the completion of the work per the terms and conditions of the Agreement. The party initiating the termination action must allow the breaching party an opportunity to dispute or cure the breach.

The terminating party must provide the breaching party [7] days advance written notice of its intent to terminate the Agreement. The notice must specify the nature and extent of the breach, the conditions necessary to cure the breach, and the effective date of the termination action. The rights and remedies in this clause are in addition to any other rights and remedies provided by law or under this agreement.

- a) **Termination by Owner:** The Owner may terminate this Agreement for cause in whole or in part, for the failure of the Consultant to:
1. Perform the services within the time specified in this contract or by Owner approved extension;
  2. Make adequate progress so as to endanger satisfactory performance of the Project; or
  3. Fulfill the obligations of the Agreement that are essential to the completion of the Project.

Upon receipt of the notice of termination, the Consultant must immediately discontinue all services affected unless the notice directs otherwise. Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete.

Owner agrees to make just and equitable compensation to the Consultant for satisfactory work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services.

Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

If, after finalization of the termination action, the Owner determines the Consultant was not in default of the Agreement, the rights and obligations of the parties shall be the same as if the Owner issued the termination for the convenience of the Owner.

- b) **Termination by Consultant:** The Consultant may terminate this Agreement for cause in whole or in part, if the Owner:
1. Defaults on its obligations under this Agreement;
  2. Fails to make payment to the Consultant in accordance with the terms of this Agreement;
  3. Suspends the project for more than [180] days due to reasons beyond the control of the Consultant.

Upon receipt of a notice of termination from the Consultant, Owner agrees to cooperate with Consultant for the purpose of terminating the agreement or portion thereof, by mutual consent. If Owner and Consultant cannot reach mutual agreement on the termination settlement, the Consultant may, without prejudice to any rights and remedies it may have, proceed with terminating all or parts of this Agreement based upon the Owner's breach of the contract.

In the event of termination due to Owner breach, the Consultant is entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all justified reimbursable expenses incurred by the Consultant through the effective date of termination action. Owner agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

## **A24 TRADE RESTRICTION CERTIFICATION**

### **A24.1 SOURCE**

49 USC § 50104

49 CFR Part 30

### **A24.2 APPLICABILITY**

Unless waived by the Secretary of Transportation, Sponsors may not use AIP funds on a product or service from a foreign country included in the current list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR).

**Contract Types** – The trade restriction certification and clause apply to all AIP funded projects.

**Use of Provision – MANDATORY TEXT.** 49 CFR Part 30 prescribes the language for this model clause. The Sponsor must include this certification language in all contracts and subcontracts without modification.

### **A24.3 MANDATORY SOLICITATION CLAUSE**

#### **TRADE RESTRICTION CERTIFICATION**

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

- 1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);
- 2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and
- 3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

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

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

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 an Offeror or subcontractor:

- 1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR; or
- 2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list; or
- 3) who incorporates in the public works project any product of a foreign country on such USTR list.

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.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

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



**A25 VETERAN'S PREFERENCE****A25.1 SOURCE**

49 USC § 47112(c)

**A25.2 APPLICABILITY**

**Contract Types** – This provision applies to all AIP funded projects that involve labor to carry out the project. This preference, which excludes executive, administrative, and supervisory positions, applies to covered veterans [as defined under § 47112(c)] only when they are readily available and qualified to accomplish the work required by the project.

**Use of Provision** – No mandatory text provided. The following language is acceptable to the FAA and meets the intent of this requirement. If the Sponsor uses different language, the Sponsor's language must fully satisfy the requirements of 49 USC § 47112.

**A25.3 MODEL CONTRACT CLAUSE****VETERAN'S PREFERENCE**

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 USC § 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

## General Contract Provisions

### Section 10 Definition of Terms

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-01</b>	<b>AASHTO</b>	The American Association of State Highway and Transportation Officials.
<b>10-02</b>	<b>Access Road</b>	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
<b>10-03</b>	<b>Advertisement</b>	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
<b>10-04</b>	<b>Airport</b>	Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.
<b>10-05</b>	<b>Airport Improvement Program (AIP)</b>	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
<b>10-06</b>	<b>Air Operations Area (AOA)</b>	The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
<b>10-07</b>	<b>Apron</b>	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
<b>10-08</b>	<b>ASTM International (ASTM)</b>	Formerly known as the American Society for Testing and Materials (ASTM).

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-09</b>	<b>Award</b>	The Owner's notice to the successful bidder of the acceptance of the submitted bid.
<b>10-10</b>	<b>Bidder</b>	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
<b>10-11</b>	<b>Building Area</b>	An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.
<b>10-12</b>	<b>Calendar Day</b>	Every day shown on the calendar.
<b>10-13</b>	<b>Certificate of Analysis (COA)</b>	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
<b>10-14</b>	<b>Certificate of Compliance (COC)</b>	The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
<b>10-15</b>	<b>Change Order</b>	A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.
<b>10-16</b>	<b>Contract</b>	<p>A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.</p> <p>The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.</p>
<b>10-17</b>	<b>Contract Item (Pay Item)</b>	A specific unit of work for which a price is provided in the contract.
<b>10-18</b>	<b>Contract Time</b>	The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		calendar or working days, the contract shall be completed by that date.
<b>10-19</b>	<b>Contractor</b>	The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
<b>10-20</b>	<b>Contractors Quality Control (QC) Facilities</b>	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
<b>10-21</b>	<b>Contractor Quality Control Program (CQCP)</b>	Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
<b>10-22</b>	<b>Control Strip</b>	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
<b>10-23</b>	<b>Construction Safety and Phasing Plan (CSPP)</b>	The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
<b>10-24</b>	<b>Drainage System</b>	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
<b>10-25</b>	<b>Engineer</b>	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.
<b>10-26</b>	<b>Equipment</b>	All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.
<b>10-27</b>	<b>Extra Work</b>	An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or Resident Project Representative (RPR) to be necessary to

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		complete the work within the intended scope of the contract as previously modified.
<b>10-28</b>	<b>FAA</b>	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
<b>10-29</b>	<b>Federal Specifications</b>	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
<b>10-30</b>	<b>Force Account</b>	<p><b>a.</b> Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p><b>b.</b> Owner Force Account - Work performed for the project by the Owner's employees.</p>
<b>10-31</b>	<b>Intention of Terms</b>	<p>Whenever, in these specifications or on the plans, the words “directed,” “required,” “permitted,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner.</p> <p>Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.</p>
<b>10-32</b>	<b>Lighting</b>	A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
<b>10-33</b>	<b>Major and Minor Contract Items</b>	A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-34</b>	<b>Materials</b>	Any substance specified for use in the construction of the contract work.
<b>10-35</b>	<b>Modification of Standards (MOS)</b>	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
<b>10-36</b>	<b>Notice to Proceed (NTP)</b>	A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.
<b>10-37</b>	<b>Owner</b>	The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. Where the term “Owner” is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is Greenville Spartanburg International Airport.
10-38	Passenger Facility Charge (PFC)	Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.
<b>10-39</b>	<b>Pavement Structure</b>	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
<b>10-40</b>	<b>Payment bond</b>	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.
<b>10-41</b>	<b>Performance bond</b>	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
<b>10-42</b>	<b>Plans</b>	The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.'
<b>10-43</b>	<b>Project</b>	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
<b>10-44</b>	<b>Proposal</b>	The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		and furnish the necessary materials in accordance with the provisions of the plans and specifications.
<b>10-45</b>	<b>Proposal guaranty</b>	The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.
<b>10-46</b>	<b>Quality Assurance (QA)</b>	Owner's responsibility to assure that construction work completed complies with specifications for payment.
<b>10-47</b>	<b>Quality Control (QC)</b>	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
<b>10-48</b>	<b>Quality Assurance (QA) Inspector</b>	An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
<b>10-49</b>	<b>Quality Assurance (QA) Laboratory</b>	The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.
<b>10-50</b>	<b>Resident Project Representative (RPR)</b>	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
<b>10-51</b>	<b>Runway</b>	The area on the airport prepared for the landing and takeoff of aircraft.
<b>10-52</b>	<b>Runway Safety Area (RSA)</b>	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.
<b>10-53</b>	<b>Safety Plan Compliance Document (SPCD)</b>	Details how the Contractor will comply with the CSPP.
<b>10-54</b>	<b>Specifications</b>	A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		contract specifications by reference shall have the same force and effect as if included in the contract physically.
<b>10-55</b>	<b>Sponsor</b>	A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.
<b>10-56</b>	<b>Structures</b>	Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
<b>10-57</b>	<b>Subgrade</b>	The soil that forms the pavement foundation.
<b>10-58</b>	<b>Superintendent</b>	The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.
<b>10-59</b>	<b>Supplemental Agreement</b>	A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.
<b>10-60</b>	<b>Surety</b>	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.
<b>10-61</b>	<b>Taxilane</b>	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
<b>10-62</b>	<b>Taxiway</b>	The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.
<b>10-63</b>	<b>Taxiway/Taxilane Safety Area (TSA)</b>	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See



<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		the construction safety and phasing plan (CSPP) for limits of the TSA.
<b>10-64</b>	<b>Work</b>	The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.
<b>10-65</b>	<b>Working day</b>	A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.
<b>10-66</b>	<b>Owner Defined terms</b>	None

**END OF SECTION 10**

## Section 20 Proposal Requirements and Conditions

**20-01 Advertisement (Notice to Bidders).** Refer to attached section NB, Notice to Bidders.

**20-02 Qualification of bidders.** Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

**20-03 Contents of proposal forms.** The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

**20-04 Issuance of proposal forms.** The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.
- c. Documented record of Contractor default under previous contracts with the Owner.
- d. Documented record of unsatisfactory work on previous contracts with the Owner.

**20-05 Interpretation of estimated proposal quantities.** 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 Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

**20-06 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. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and 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 to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

**20-07 Preparation of proposal.** The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

**20-08 Responsive and responsible bidder.** A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

**20-09 Irregular proposals.** Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.
- f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

**20-10 Bid guarantee.** Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

**20-11 Delivery of proposal.** Refer to attached Notice to Bidders and Instructions to Bidders.

**20-12 Withdrawal or revision of proposals.** A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

**20-13 Public opening of proposals.** Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

**20-14 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 until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in paragraph 20-04, *Issuance of Proposal Forms*, of this section.

**20-15 Discrepancies and Omissions.** A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than **seven (7)** days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

## END OF SECTION 20

## Section 30 Award and Execution of Contract

**30-01 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. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words 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 Section 20, paragraph 20-09, *Irregular Proposals*.

b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

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. All such actions shall promote the Owner's best interests.

**30-02 Award of contract.** The award of a contract, if it is to be awarded, shall be made within **180** calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

**30-03 Cancellation of award.** The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 *Approval of Contract*.

**30-04 Return of proposal guaranty.** All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals*. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds*.

**30-05 Requirements of contract bonds.** At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

**30-06 Execution of contract.** The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds*, of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

**30-07 Approval of contract.** Upon receipt of the contract and contract bond or 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 fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

**30-08 Failure to execute contract.** Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract*, of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

**END OF SECTION 30**

## Section 40 Scope of Work

**40-01 Intent of contract.** The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

**40-02 Alteration of work and quantities.** The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

**40-03 Omitted items.** The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

**40-04 Extra work.** Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work

covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

**40-05 Maintenance of traffic.** It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/>), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

**40-06 Removal of existing structures.** All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.



**40-07 Rights in and use of materials found in the work.** Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

- a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,
- b. Remove such material from the site, upon written approval of the RPR; or
- c. Use such material for the Contractor's own temporary construction on site; or,
- d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR's approval in advance of such use.

Should the RPR approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

**40-08 Final cleanup.** Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

## END OF SECTION 40

## Section 50 Control of Work

**50-01 Authority of the Resident Project Representative (RPR).** The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

**50-02 Conformity with plans and specifications.** All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

**50-03 Coordination of contract, plans, and specifications.** The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If

any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

**50-04 List of Special Provisions.** Refer to attached Special Provisions.

**50-05 Cooperation of Contractor.** The Contractor shall be supplied with five hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

**50-06 Cooperation between Contractors.** The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

**50-07 Construction layout and stakes.** The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): **AutoCAD DWG and PDF**

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

**50-08 Authority and duties of Quality Assurance (QA) inspectors.** QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

**50-09 Inspection of the work.** All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

**50-10 Removal of unacceptable and unauthorized work.** All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

**50-11 Load restrictions.** The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

**50-12 Maintenance during construction.** The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

**50-13 Failure to maintain the work.** Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

**50-14 Partial acceptance.** If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

**50-15 Final acceptance.** Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such

inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

**50-16 Claims for adjustment and disputes.** If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

#### **END OF SECTION 50**

## Section 60 Control of Materials

**60-01 Source of supply and quality requirements.** The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum*, that is in effect on the date of advertisement.

**60-02 Samples, tests, and cited specifications.** All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP).

**60-03 Certification of compliance/analysis (COC/COA).** The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by “brand name or equal” and the Contractor elects to furnish the specified “or equal,” the Contractor shall be required to furnish the manufacturer’s certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed “or equal” is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

**60-04 Plant inspection.** The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

- a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.
- b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.
- c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

**60-05 Engineer/ Resident Project Representative (RPR) field office.** An Engineer/RPR field office is not required.

**60-06 Storage of materials.** Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor’s plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner’s permission.



All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

**60-07 Unacceptable materials.** Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

**60-08 Owner furnished materials.** The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

## END OF SECTION 60

## Section 70 Legal Regulations and Responsibility to Public

**70-01 Laws to be observed.** The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

**70-02 Permits, licenses, and taxes.** The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

**70-03 Patented devices, materials, and processes.** If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

**70-04 Restoration of surfaces disturbed by others.** The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) must be shown on the plans.

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

**70-05 Federal Participation.** The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

**70-06 Sanitary, health, and safety provisions.** The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

**70-07 Public convenience and safety.** The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic*, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

**70-08 Construction Safety and Phasing Plan (CSPP).** The Contractor shall complete the work in accordance with an approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction.

**70-09 Use of explosives.** The use of explosives is not permitted on this project.

**70-10 Protection and restoration of property and landscape.** The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

**70-11 Responsibility for damage claims.** The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

**70-12 Third party beneficiary clause.** It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

**70-13 Opening sections of the work to traffic.** If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such “phasing” of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

**70-14 Contractor’s responsibility for work.** Until the RPR’s final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

**70-15 Contractor’s responsibility for utility service and facilities of others.** As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities

during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to “The Person to Contact” as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor’s opinion, the Owner’s assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner’s “Person to Contact” no later than two normal business days prior to the Contractor’s commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor’s failure to give the two days’ notice shall be cause for the Owner to suspend the Contractor’s operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor’s operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

**70-16 Furnishing rights-of-way.** The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor’s operations.

**70-17 Personal liability of public officials.** In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

**70-18 No waiver of legal rights.** Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not

preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

**70-19 Environmental protection.** The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

**70-20 Archaeological and historical findings.** Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work*, and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

**70-21 Insurance Requirements.** Refer to insurance requirements.

## END OF SECTION 70

## Section 80 Execution and Progress

**80-01 Subletting of contract.** The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least **25** percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

**The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized on the project. As a minimum, the information shall include the following:**

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

**80-02 Notice to proceed (NTP).** The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within **30** days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.

**80-03 Execution and progress.** Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least 10 days prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

**80-04 Limitation of operations.** The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least [ 48 hours ] prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis.

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

**80-04.1 Operational safety on airport during construction.** All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.



**80-05 Character of workers, methods, and equipment.** The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

**80-06 Temporary suspension of the work.** The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

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

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

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

**80-07 Determination and extension of contract time.** The number of calendar days shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

**80-07.1 Contract time based on calendar days.** Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

**80-08 Failure to complete on time.** For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

**80-09 Default and termination of contract.** The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or

- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

**80-10 Termination for national emergencies.** The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

**80-11 Work area, storage area and sequence of operations.** The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

## END OF SECTION 80

## Section 90 Measurement and Payment

**90-01 Measurement of quantities.** All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

### Measurement and Payment Terms

Term	Description
<b>Excavation and Embankment Volume</b>	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
<b>Measurement and Proportion by Weight</b>	The term “ton” will mean the short ton consisting of 2,000 pounds (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.
<b>Measurement by Volume</b>	Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this

<b>Term</b>	<b>Description</b>
	purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
<b>Asphalt Material</b>	Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
<b>Cement</b>	Cement will be measured by the ton (kg) or hundredweight (km).
<b>Structure</b>	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
<b>Timber</b>	Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
<b>Plates and Sheets</b>	The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
<b>Miscellaneous Items</b>	When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
<b>Scales</b>	<p>Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.</p> <p>Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</p>

Term	Description
	<p>In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.</p> <p>In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.</p> <p>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</p> <p>Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.</p> <p>All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.</p>
<b>Rental Equipment</b>	<p>Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 <i>Payment for Extra Work</i>.</p>
<b>Pay Quantities</b>	<p>When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.</p>

**90-02 Scope of payment.** The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the “basis of payment” subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

**90-03 Compensation for altered quantities.** When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work*

*and Quantities*, will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

**90-04 Payment for omitted items.** As specified in Section 40, paragraph 40-03, *Omitted Items*, the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

**90-05 Payment for extra work.** Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

**90-06 Partial payments.** Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

a. From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-14. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made

an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

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

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

**90-07 Payment for materials on hand.** Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.
- b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.
- d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.
- e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.



The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

**90-08 Payment of withheld funds.** At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.
- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

**90-09 Acceptance and final payment.** When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes*, or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

**90-10 Construction warranty.**

- a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.
- b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must

be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

**90-11 Contractor Final Project Documentation.** Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual(s).

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

## END OF SECTION 90

## SPECIAL CONTRACT PROVISIONS

### Section 10 General Requirements

#### 10.1 General

- a. OWNER. Wherever the word Owner or Sponsor appears in these specifications it shall be construed to mean the Greenville-Spartanburg Airport District. The Owner's contact information is as follows:

Greenville-Spartanburg International Airport

2000 GSP Drive, Suite 1

Greer, SC 29651

Phone: (864) 848-6272

Mr. David Edwards, Airport Director

Email: [dewards@gspairport.com](mailto:dewards@gspairport.com)

- b. ENGINEER. The engineering company and contact information is as follows:

McFarland Johnson, Inc.

330 E. Coffee St., Suite 5000

Greenville, SC 29609

864-326-0250

Amanda Sheridan

asheridan@mjinco.com

- c. LOCATION OF THE WORK. Greenville-Spartanburg International Airport is owned and operated by the Greenville-Spartanburg Airport District. The Airport is located in Greer, South Carolina.

- d. DESCRIPTION OF THE WORK AND CONTRACT ALTERNATES.

Project Name: Design-Build for Terminal AHU Replacement

Project Description: The project consists of providing design-build services and all labor, materials, and equipment at the Greenville-Spartanburg International Airport for Design-Build Services for the Air Handler Unit Replacement Project at GSP. The scope of construction will be the removal and replacement of 10 existing air handler units in the terminal building. See Bidding Documents for details.

#### 10.2 Definitions

- a. Day - Unless otherwise defined shall mean "Calendar" Day.
- b. May – Allowable.
- c. Shall – A mandatory item to be performed under the contract.
- d. Subcontractor – A party in which provides labor and / or material for work at the project site. A Subcontractor will be under a separate contract or agreement with the Contractor. The Contractor is responsible for all subcontractor actions and performance as part of the limits of this contract. Nothing contained in the Contract Documents shall create a contractual relationship between the Owner and any Subcontractor.
- e. Will - A mandatory item to be performed under the contract.

**10.3 Pre-Construction Conference.** The Contractor's project superintendent and other key staff, subcontractor representatives, FAA representative, Owner, Engineer, and the Resident Project Representative (RPR) shall be afforded the opportunity to attend a pre-construction conference, conducted by the Engineer to discuss and implement the minimum following subjects or items.

**a. Identify main points of contact**

1. Owner, Owner's Representatives, Contractor, Superintendent, Subcontractors, Engineer, R, etc.
2. Identify roles and responsibilities of each party
3. Discuss authority of RPR - Advise that the RPR has the authority to suspend operations, wholly or in part, when safety violations or nonconformance to the contract
4. Explain relationship between FAA and Sponsor

**b. Scope of work**

1. Description and map of proposed work
2. Proposed schedule of work
3. Identify construction phasing concerns

**c. Notice-To-Proceed: Issuance contingent upon;**

1. Execution of grant agreement
2. Submittal of executed contract & required bonds
3. Sponsor acceptance of DBE participation
4. FAA approval of waiver to Buy American preferences (if applicable)
5. FAA Approval of Construction Observation Program
6. Submittal of a properly executed sponsor certification for construction contracts

**d. Operational safety & security: Discuss the following:**

1. Construction Safety and Phasing Plan (CSPP)
2. Delineation of construction limits
3. Runway and taxiway safety areas limits (open trenches, drop offs, irregular surfaces)
4. Potential impacts to airport operations
5. Operational Safety requirements of approved safety plan and AC 150/5370-2
6. Vehicular operation within the AOA with emphasis on runway incursions
7. Staging area location and haul route limitations
8. Stockpile Limitations and Part 77 Notification (FAA Form 7460-1)
9. Equipment heights and Part 77 Notification (FAA Form 7460-1)
10. Foreign Object Debris (FOD) control (windblown and tracked-on)
11. Temporary markings & barricades
12. Airfield security requirements
13. Non-compliance consequences (Removal, suspension of work etc)

**e. NOTAMS**

1. Airport Operator issued NOTAMs
2. Designation of sponsor representative responsible for notifying the Flight Service Station serving the airport of the proposed start and completion dates of construction or any circumstances requiring a NOTAM.
3. Facility Outages: 7-day advance notification to FAA Technical Operations
- f. FAA Technical Operations (Airway Facilities)**
  1. FAA Facility Outages: 7-day advance notice required
  2. Location of buried cables
- g. Construction Observation Program**
  1. Identify Contractor's and Sponsors laboratory
  2. Acceptance testing versus Quality Control testing
  3. Test reports, record keeping, daily diary
- h. Project Submittals: Approval based upon;**
  1. Technical requirements
  2. Buy American Provisions (Origin of Manufacture)
  3. Approved Lighting Equipment (Appendix 3 of AC 150/5345-53)
- i. Labor Requirements**
  1. Davis Bacon Wage Rates (Must be posted on conspicuous project board)
  2. Labor poster (Must be posted prior to start of work)
  3. Submittal of payrolls
  4. Wage rate interviews
- j. Civil Rights/DBE Requirements**
  1. Advise contractor that project is subject to the EEO clause
  2. EEO posted notices must be posted prior to start of work
  3. Monitoring of DBE
- k. Contract Modification Process**
  1. Modifications require approval before work is started
  2. Sponsor may not seek reimbursement for change order work until FAA approves AIP participation in the change order.
- l. Utilities**
  1. Locating
  2. Protection
  3. Damage to existing in-use pavement lighting, marking or NAVAIDS by construction forces
- m. Environmental Issues**

1. Compliance with applicable federal, state, and local air and water quality standards during construction includes environmental mitigation actions resulting from the environmental coordination process
2. Storm Water Permitting
3. Dust control and environmental factors, such as burning, etc.
4. Maintenance of sanitary facilities on the project site
5. Waste Disposal

#### **10.4 Contractors Construction Hours**

- a. Contract Construction Work Hours – Work hours shall be from 6:00 AM to 9:00 PM Monday through Saturday. Work outside of this schedule window shall be coordinated with Airport Operations and agreed to by the RPR.
- b. Equipment Servicing - Contractor can service construction equipment day or night. Local lighting can be provided for servicing of vehicles; however, the Contractor shall take extra care to screen the area and to minimize noise and lighting. Large area flood lighting used during construction hours will not be allowed for servicing vehicles. Consistent complaints by the public of the servicing of vehicles after 10 PM will be grounds for disallowing that operation and also subject to \$5,000 fines.

#### **10.5 Record Drawings**

- a. The Contractor shall keep one copy of all specifications, plans, addenda, modifications, working drawings and shop drawings at the site, in good order and annotate on the drawings all changes made during the construction process as they occur. Upon completion of the project and prior to submittal of the final application for payment, the annotated set of plans showing the "as-built" work together with any annotated working and shop drawings of significance shall be delivered to the Engineer for the Owner's record. See Technical Specs Section M-103 for requirements of the as-built survey.

#### **10.6 Existing Utilities.** The Contractor is hereby advised that the location of all utilities, as shown on the Plans, may not be complete nor exact and the Contractor shall satisfy himself as to the exact location of the utilities. The Contractor shall be responsible for any damage done to public or private property and shall be repaired at the Contractor's expense. The Contractor will be required to locate any and all utilities prior to starting the work.

- a. Location of any underground gas, electrical, or telephone lines will be field verified by calling the Locate Services telephone number 1-800-245-4848.
- b. The Contractor is required by Locate Services to call at least two working days before digging at the minimum or as required by law.
- c. The Contractor is to protect all existing facilities during construction. Utility poles that may be affected by the construction activities shall be protected by the Contractor. The Contractor shall notify the appropriate Utility Company or agency of any construction that may affect their facilities.
- d. **WATER FOR CONSTRUCTION PURPOSES.** All water required for and in connection with the work to be performed shall be provided by the Contractor at Contractor's expense.
- e. **TELEPHONE and INTERNET SERVICE.** Contractor shall make all necessary arrangements with the telephone internet service providers for telephones and internet service in the construction and engineer's field offices at the site, and shall pay all monthly charges thereof including long distance calls. All contractors and others performing work or furnishing services at the site shall be permitted

to use the Contractor's telephone and internet connection without charge for calls pertaining to the work.

- f. **SANITARY FACILITIES.** Contractor shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and other performing work or furnishing services on the Project. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 men and a separate toilet for the gate guard. Contractor shall enforce the use of such sanitary facilities by all personnel at the site.

**END OF SPECIAL PROVISION 10**

## Section 20 Insurance Requirements

### 20.1 Requirements

- a. The Bidder shall consider in preparing a bid hereunder that the Contractor and all subcontractors performing Work on the Project must comply with each condition, requirement or specification set forth in form certificate, unless such requirements are specifically accepted in writing by the Owner's Risk Management Administrator. The Contractor must either include all subcontractors performing work hereunder as insureds under each required policy or furnish a separate certificate for each subcontractor. As part of the bid proposal, the Contractor is required to certify the Contractors awareness and ability to meet the minimum insurance requirements set forth throughout the project documents by submittal of the Certificate of Insurability with the submitted bid.
- b. The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required as stated in Special Provisions or elsewhere in the contract. All return of premiums and any dividends on these policies shall be paid to the Contractor purchasing the policies.
- c. Before commencing work under this contract, the Contractor shall certify to the Owner in writing by Certificate of Insurance (COI) and attached endorsements, specifically naming **Greenville-Spartanburg International Airport** as additional insureds. The Contractor shall furnish separate COIs to the Owner naming them as additional insureds. The certifications shall be on a COI form as determined by the Owner or equal to form ACORD 25 and additional insured endorsements approved by Airport District. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Owner's interest shall not be effective:
  1. for such period as the laws of the State in which this contract is to be performed prescribe, or
  2. until 30 days after the insurer or the Contractor gives written notice to the Owner, whichever period is longer.
- d. The insurance of the Contractor shall be considered the Primary insurance, and all other insurance shall be considered as excess over and above the Contractor's coverage.
- e. The Contractor shall insert the substance of this section in subcontracts under this contract and shall require subcontractors to provide and maintain the insurance required as stated in this Special Provision or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies (reflecting the additional insureds, project name and AIP Project number to ensure proper filing of documents) available to the Owner upon request.

### 20.2 Insurance

- a. During the term of this contract and any extension, without limiting any liabilities or any other obligation of Contractor, the Contractor shall purchase and maintain, and cause its subcontractors to purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction of the State the insurance required by this clause. Insurance companies from which all insurance is obtained must have a financial strength rating of "A Minus" or better as rated by the A.M. Best Company.
- b. **INDEMNIFICATION** - The Contractor shall, indemnify and save and hold harmless the Owner, the Engineer, their officers, subsidiaries or affiliates, elected and appointed officials, employees, volunteers, representatives and agents from all suits, actions, and claims of any character brought because of injuries or damages received or sustained by any person, persons, or property on account of the operations of said Contractor or its Subcontractors; or on account of or in sequence of any



act or omission, neglect, or misconduct of said Contractor or its Subcontractors; or because of any claims arising or amounts recovered from infringements of patent, trademark, or copyright; or because of any claims arising or amounts recovered under the Worker's Compensation Act; or under any other law, ordinance, order, or decree.

- c. The insurance described herein is intended to fully protect the Owner, the Engineer, the Contractor, and Subcontractors from any loss whatsoever arising from Contractor's operations. The Contractor and the company issuing such insurance shall prosecute and defend all court actions at no expense to the Owner or to other named insured.
- d. The contractor shall maintain and furnish evidence of the following insurance, with the stated minimum limits:
  - 1. Worker's Compensation and Employer's Liability. The contractor shall comply with applicable Federal and State workers' compensation and occupational disease statutes. The contractor shall maintain employer's liability coverage of at least \$100,000 each person and \$500,000 aggregate, except in States with exclusive or monopolistic funds that do not permit worker's compensation to be written by private carriers.
  - 2. Commercial General Liability. The contractor shall maintain bodily injury general liability insurance written on a comprehensive form of policy of at least \$5,000,000 each Occurrence and \$5,000,000 General Aggregate limit. Products/Completed Operations Aggregate of at least \$1,000,000 and Personal and Advertising Injury Limit of \$1,000,000.
  - 3. Business Automobile Liability. If automobiles will be used in connection with performance of this contract, the contractor shall maintain automobile liability insurance written on a comprehensive form of policy with coverage of at least \$5,000,000 combined single limit for bodily injury and property damage. Automobile, truck and vehicle insurance shall be carried on all Contractor's and Subcontractor's trucks, cars, and vehicles used on this project, with the same coverage as stated above.
  - 4. Additional Umbrella Liability. The contractor shall maintain \$5,000,000 for each Occurrence and \$5,000,000 Aggregate Limit. This is required for all contractor activities which are unescorted on the operational airside of the airport.
- e. Each policy shall include substantially the following provision:
  - 1. "It is a condition of this policy that the company furnish written notice to the Owner and each additional insured 30 days in advance of the effective date of any reduction in or cancellation of this policy."
  - 2. The Contractor shall furnish a certificate of insurance or, if required by the Owner or Additional Insured, true copies of liability policies and manually countersigned endorsements of any changes, including the Project Name and AIP Project number to ensure proper filing of documents. Insurance shall be effective, and evidence of acceptable insurance furnished, before beginning performance under this contract. Evidence of renewal shall be furnished not later than five days before a policy expires.
  - 3. The maintenance of insurance coverage as required by this clause is a continuing obligation, and the lapse or termination of insurance coverage without replacement coverage being obtained will be grounds for termination for default. Such insurance shall remain in effect for a minimum of two years from the date of final payment to the contractor.

#### **END OF SPECIAL PROVISION 20**

## Section 30 Submittals

### 30.1 Summary

- a. This section describes the process for handling Contractor submittals.
- b. Documents affecting work of this Section include, but are not necessarily limited to, General Provisions and other sections of these specifications.

### 30.2 Submittals

- a. Except as otherwise specified below, as soon as practicable after contract award and without causing delay in the work, submit to the RPR and Engineer one (1) electronic copy of submittals of all items for which submittals are specified in other sections, and for all major submittal equipment whether specified in other sections or not. Each submittal shall be clearly marked with the project name, dated, and accompanied by a letter of transmittal listing all items included in the submittal and referencing the project specification page and article numbers applicable to each item.
- b. Submittals shall include all test results and/or certificates necessary to show that the item conforms to the standards specified. Such standards shall include ASTM, AASHTO, FAA, PCA, Federal Specifications or any other standard listed in these specifications.
- c. Apply Contractor's stamp certifying that the Contractor verified products required, field dimensions, adjacent construction work, and coordination of information in accordance with the work and contract documents.
- d. Include the following information on the transmittal letter for processing and recording action taken:
  - 1. Project name and AIP number
  - 2. Date
  - 3. Name and address of the Contractor
  - 4. Submittal Number uniquely identifying the submittal.
  - 5. Name and title of appropriate Specification Section
  - 6. Drawing number and detail references, as appropriate
  - 7. If made, request to reduce Engineer review period. Such request will be considered but may or may not be granted.
- e. It is preferred for submittals to be sent for review through email in electronic, pdf format. A transmittal letter will still be required to be submitted. Contractor shall include in the subject line of the email:
  - 1. Airport ID: **(GSP)**
  - 2. Project Title
  - 3. Submittal Number
- f. Submittals shall include when necessary:
  - 1. Name and address of the subcontractor
  - 2. Name and address of the supplier

## 3. Name of the manufacturer

- g. If Contractor is requested to “Revise and Resubmit,” the Submittal number shall remain the same, but followed by “-R1”, “-R2”, “-R3”, and so on for the corresponding resubmittals.

**30.3 Quality Assurance**

- a. Before submission to the Engineer, the Contractor shall check the submittals of all items furnished directly by him, and the applicable Subcontractor shall check the submittals of all items furnished by the Subcontractor involved, as follows: check the submittal drawings for completeness and compliance with the contract documents; check and verify all dimensions, field conditions certifications relating to the submittals and certify in writing that these checks have been made.
  - 1. The Engineer will return for resubmission, all submittals without the above specified approval and certification, and all submittals which in the Engineer's opinion contain numerous discrepancies and/or have not been checked by the Contractor or Subcontractor.

**30.4 Submittal Review**

- a. After the Engineer has reviewed the submittals, except as otherwise specified below, submittals will be dated, and returned to the Contractor. If submittals are rejected, they will be returned to the Contractor, with indications of the required corrections and changes made. Make such corrections and changes as indicated. Resubmit submittals as specified above, as often as required by the Engineer to complete the review. No correction or change indicated on submittals shall be considered as an order for extra work.
- b. The Engineer's review will be only for general conformance with the design concept of the work and for general compliance with the information contained in the Contract Documents. The review of a specified item, as such, will not indicate review of the assembly in which the item functions. Review by the Engineer will not relieve the Contractor or Subcontractor from responsibility for accuracy of submittals, proper fitting, coordination, construction or work, and furnishing materials and work required by Contract but not indicated on submittals, for any errors or omissions in the submittals or shop drawings nor from Contractor's responsibility for complying with the Contract Documents.
- c. Any material ordered, or work performed prior to obtaining an approved submittal shall be at the Contractor's risk and subject to rejection.

**END OF SPECIAL PROVISION 30**

## Section 40 Schedules

### 40.1 Construction Scheduling for Aviation Projects

- a. The Contractor shall create and maintain a construction work schedule throughout the entire project, beyond substantial completion, until all punch-list items are completed and accepted. The work under this Contract shall be planned, scheduled, maintained and reported using computerized Critical Path Method (CPM) scheduling software that utilizes the precedence diagram method. The schedule shall be developed in a global calendar day format, unless otherwise specifically provided in the Contract Documents.
- b. Related Work:
  1. Contract document sections listed below outline requirements impacting project scheduling. Contractor shall review these sections and incorporate the entire contract requirements into the project schedule. Contract document sections affecting construction work scheduling include, but are not necessarily limited to:
    - a) GP-60 - Control of Materials
    - b) GP-90 - Measurement and Payment
    - c) Special Provision 50 - Sequence of Construction & Liquidated Damages
    - d) Construction Plans
  2. The intent of this specification is to consolidate the requirements listed above; to clarify Contractor responsibilities; outline schedule development; and identify submittal requirements throughout the project duration.

### 40.2 General Requirements

- a. The Construction Duration is the period stated in Special Provision 50 - Sequence of Construction & Liquidated Damages or designated portion thereof, including adjustments thereto approved by the Owner or RPR as provided in the Contract Documents.
- b. The date of “Project Completion” of the Work or designated portion thereof is the date approved by the Owner or RPR when
  1. The requirements of this Subsection and any special requirements provided in the Construction Services Agreement have been satisfied, and
  2. Construction is complete, in accordance with the Contract Documents, so the Airport District can legally use or occupy the Project or designated portion thereof for the use for which it is intended.
- c. Periods of time within which the Contractor or the Owner or any other party is required to act under the provisions of the Contract Documents when described in terms of “days” shall, unless otherwise specified, mean Calendar days (and not working days), except that if the last day of any such time period falls on a Saturday, Sunday or legal holiday, the period of time during which the required action must be taken will be extended to the next following working day. The terms “working day” and “business day” shall mean any calendar day except Sundays and legal holidays at the place of the Project.

- 40.3 Project Schedule Method.** The Contractor shall create and maintain a Critical Path Method (CPM) Project Schedule showing the manner of execution of work that the contractor intends to follow to complete the contract within the allotted time. The project schedule shall employ computerized CPM

for the planning, scheduling and reporting of the work as described in this specification. The CPM project schedule shall be prepared using the Precedence Diagram Method (PDM).

**40.4 Software.** The Contractor shall create and maintain the schedule using **Primavera P6 Project Manager or above or Primavera Contractor 4.1 or above**. WBS shall show all work and time impact items. Use of alternate scheduling software may be requested but is subject to acceptance by the Owner or RPR.

**40.5 Personnel Qualifications.** The Contractor shall provide an individual, referred to hereafter as the Scheduler, to create and maintain the Project Schedule. The Scheduler shall be proficient in Critical Path Method (CPM) analysis and must have demonstrated experience. Certification as a scheduling professional is not required, but is preferred. Contractor shall provide the designated individual's resume for approval to the Owner or RPR. The Scheduler must possess sufficient experience to be able to perform required tasks on the specified software and be able to prepare and interpret reports from the software. The Scheduler shall be made available for discussion or meetings when requested by the Owner or RPR.

**40.6 Requirements Pre-Meeting.** A project construction schedule meeting shall be completed with the Owner, RPR, and Design Consultant prior to Contractor developing a detailed Project Baseline Schedule. Pre-Meeting should take place within fourteen calendar days of NTP issuance. Contractor shall provide a proposed summary level schedule for discussion purposes. Summary schedule provided shall indicate major work items for the first 90 days of construction including known time constraints or concerns. The Scheduler shall attend this meeting and be familiar with the project's requirements and work activities.

**40.7 Schedule Submittal.** The Contractor shall submit a Baseline Project Schedule to the Owner, RPR, and the Design Consultant at least seven (7) calendar days prior to the pre-construction conference. The Project Schedule shall show detailed work activities as well as the sequencing and interdependence of activities required for complete performance of the work. Activities shall be linked with each other and predecessors incorporated.

All schedule submittals shall be in electronic form to include 11x17 PDF plots of the schedule, a PDF plot defining the Critical Path and a two-week look-ahead. A copy of the native file in Primavera format shall also be included. The Contractor shall submit the schedule to the Airport Project Manager, RPR, and Engineer via electronic mail or other electronic media acceptable to the Owner. The Owner and RPR will review the Project Schedule within fifteen (15) calendar days for compliance with the specifications and notify the Contractor at the pre-construction conference of its acceptability. No work shall begin until the Owner and RPR has accepted the Project Schedule.

**40.8 Schedule Acceptance Prior to Construction Start.** Contractors detailed baseline schedule shall be reviewed and accepted by the Owner and RPR prior to start of any site construction activities. Acceptance by the Owner and RPR of a Baseline or project update schedule that exceeds contractual time does not alleviate the Contractor from meeting the contractual completion date.

The Baseline CPM schedule submittal shall include a detailed narrative explaining the Contractor's anticipated means and methods and productivity rates. The CPM schedule shall be reviewed by the Owner and RPR (as a condition of acceptance of the initial Baseline CPM Schedule and from time to time thereafter) for purposes of determining compliance with the Project Completion Date and any other schedule requirements specified in Contract Documents. This shall be done so that the Owner and RPR will be able to understand the general sequencing of the Work as proposed by the Contractor. The Owner, RPR, or Design Consultant's review and approval or acceptance of the Baseline CPM Schedule shall not constitute approval or acceptance by the Engineer of the durations or relationships of individual activities reflected in the schedule, nor otherwise affects the Contractor's sole responsibility

for the schedule. Approval of the initial Baseline CPM Schedule is a condition precedent of the Contractor's initial pay application submittal.

**40.9 Baseline CPM Schedule Sequencing.** Scheduler shall develop project sequencing that encompasses all activities that are reasonably expected to impact construction and determine the critical path to completion. The Project Schedule shall show the sequence and interdependence of activities required to complete performance of the work. Activities shall be linked with each other and predecessors incorporated along with lead/lag times to coordinate activity sequencing. No Activity shall be left open ended and shall be linked. Activity durations shall be based on task dependent and resource dependent production rates. The project calendar and resource calendar shall be identical. Activities shall be setup to automatically schedule the work. Phasing completion milestones shall be placed as hard dates without any links. This will determine positive or negative float for that milestone. The Contractor shall be responsible for assuring all work sequences are logical and show a coordinated plan of the work.

Activities shall begin at notice-to-proceed and finish with final acceptance after punch-list completion. Schedule shall be developed to show each project phase and corresponding activities. All airside projects impacting the Air Operations Areas (AOA) shall match the Construction Safety and Phasing Plan (CSPP) work items, closures and impact durations.

Baseline Schedule information and activities shall include but are not limited to:

1. Project Phases
2. Milestones as indicated in the plans and CSPP
3. AOA Closures and Impacts
4. NAVAID Closures and Impacts
5. Roadway Closures and Impacts
6. Work Breakdown Structure (WBS)
7. Key individual material submittals - review, approval, and material ordering
8. Long-lead materials – including fabrication, testing, and delivery
9. Target milestone dates for critical material deliveries
10. Non-working time
  - a) Current year City/County Holidays
  - b) Airport District non-working time frames
  - c) Monthly "Normal" Severe Weather days expected
  - d) Weekend days

Timeline will be based in calendar days. Non-Working days will be identified in the schedule and will include; current year city/county holidays; No Runway Closure Blackout dates; each individual month "normal" severe weather days; and weekend days not used for construction.

The monthly number of "Normal" severe weather days anticipated as non-working days are defined under Special Conditions – Section 40.17 Extension of Time for Adverse Weather. Additional non-working days due to severe weather, experienced during construction, will be identified at the time of occurrence and will be addressed as potential time extension.

**40.10 Work Durations and Resources.** The Scheduler shall determine work durations for each activity identified in the Work Breakdown Structure (WBS). Each activity duration shall be determined based

on anticipated contractor labor efforts, equipment utilization, production rates, other resource needs and lead times anticipated. The Baseline schedule shall reflect, or be “cost loaded” with average work crew, equipment, and other resource data to properly reflect work durations to complete each activity to final acceptance. Production rates shall be based on hourly and/or daily work day production anticipated as appropriate.

In developing the Project Schedule, the Contractor shall discuss with the Owner alternatives for the sequencing of major construction activities. This would include how the Work will be sequenced to avoid any risk to public safety or disruption or interference with airport operations.

Total float is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, for each activity in the schedule. Float time in the Project Schedule is a shared commodity between the Owner and the Contractor.

**40.11 Sub-Contractor Work Scheduling.** Prime Contractor shall obtain from each Sub-Contractor sufficient data for incorporation into Baseline Schedule. This includes anticipated WBS Activities, manpower, equipment, lead times, production rates, etc. for production and time critical activities. Sub-Contractor Critical Path Activities shall be identified and coordinated with the respective Sub-Contractor to ensure project milestones will be met. These sub-contractor activities shall be represented separately on the Baseline Schedule, progress tracked, and reported.

**40.12 Weekly Progress Tracking and Reporting.** Contractor shall monitor project progress daily and shall reflect the progress on the baseline schedule each week. Contractor shall provide an updated schedule submittal at each weekly construction status meeting. The approved baseline schedule shall be maintained to reflect original agreed to scheduling. Individual activity progress shall be reflected on this schedule. As part of its obligation to monitor and maintain schedule compliance, the Contractor shall:

1. Each activity’s progress shall be overlaid and shown on the agreed to “Baseline” schedule.
2. Progress lines as a percentage of quantity installed (activity completion) shall be shown.
3. Review and assess the performance and progress of each Subcontractor, at least monthly.
4. Establish a systematic procedure for gathering and analyzing construction data from each Subcontractor.
5. Require each Subcontractor to furnish all necessary schedule status information at each weekly construction progress meeting.

Contractor shall provide a two week look ahead schedule at each weekly meeting. The two week look ahead schedule may be a printed calendar from the baseline schedule or provided as a handwritten version presented on a monthly calendar format.

**40.13 Monthly Updates and Pay Application.** The Overall Project Schedule shall be updated monthly by the Contractor. The Project Schedule update shall be submitted one week prior to the pay application submittal. The Contractor shall meet with the Owner, RPR, and Engineer each month at a scheduled update meeting to review actual progress made. The review of progress will include activity started/finish dates, the percentage complete, remaining activity duration and quantities installed. The monthly schedule update shall include a progress narrative explaining progress, identifying progress made with out of sequence activities, activities that define the Critical Path, and identification of potential delays. The Project Schedule Narrative template at the end of this section will be required for the monthly submittal.

The project schedule update layout shall be grouped by Phase, then WBS. The layout shall include the following columns:

1. Activity ID

2. Activity Description
3. Original Durations
4. Remaining Durations
5. Start and Finish Dates
6. Baseline Start and Finish Dates
7. Total Float
8. Performance Percent Complete
9. Display logic and target bars in the Gantt bar chart view

The Monthly Schedule submittal will be used to verify pay application quantities and project percent complete. Significant discrepancies are required to be resolved before the Owner and RPR can accept the pay application for payment. The Monthly Schedule dates shall correspond to the agreed to pay application cutoff date. Payment may be delayed until acceptable baseline or updated schedule is received and accepted by the Owner and RPR. The Owner shall have a net 45 days to finalize and issue payments to the Contractor after receipt of an approved pay application.

**40.14 Contractor Changes in the Work.** If the Contractor desires to make major changes in the Project Schedule, the Contractor shall notify the Owner and RPR in writing and submit the proposed schedule revision. The written notification shall include the reason for the proposed revision, what the revision is comprised of, and how the revision was incorporated into the schedule. Major changes are hereby defined as those that may affect compliance with the contract requirements or those that change the critical path. All other changes may be accomplished through the monthly updating process without written notification.

**40.15 Change Order Work.** Work added or removed from the Contract shall be incorporated into the Baseline Schedule. Work that includes working/calendar day adjustments or impacts the Critical Path, shall be added. Material quantity adjustments that impact individual activities should have baseline durations adjusted. This work should be added to the schedule within two weeks of the known impact and with the monthly update.

Proposed Change Orders shall be added to the schedule identifying it as a Proposed Change Order. This task must be linked to the schedule with logical ties and approved by the Owner and RPR. Upon approval of Change Order, task will be renamed identifying work performed and Change Order number and resources will be added to the task.

**40.16 Delays and Extension of Time.** Only Owner responsible delays in activities that affect milestone dates or the contract completion date, as determined by CPM analysis, will be considered for a time extension. A Time Impact Analysis shall be completed as justification for the time extension and amount of additional days required. The Contractor shall notify the Owner and RPR when an impact may justify an extension of contract time or adjustment of milestone dates. This notice shall be made in writing as soon as possible, but no later than the end of the next estimate period after the commencement of an impact or the notice for a change is given to the Contractor. Not providing notice to the Owner and RPR within twenty (20) calendar days after receipt will indicate the Contractor's approval of the time charges as shown on that time statement. Future consideration of that statement will not be permitted, and the Contractor forfeits Contractor's right to subsequently request a time extension or time suspension unless the circumstances are such that the Contractor could not reasonably have knowledge of the impact by the end of the next estimate period.

**40.17 Extension of Time for Adverse Weather.** Contractor shall be entitled to an extension of Contract Time for delays associated with adverse weather conditions that are more than normally expected. For a given month additional Contract Days will be granted for Days that exceeded the "Normal" mean



number of days in that month and that can be shown to have impacted the projects critical path. For each month, normally anticipated weather days are listed below. Additional Contract Time requested shall be substantiated in the Contractor's written submitted claim which shall include a Time-Impact-Analysis (TIA) as required in the Project Schedule Specification. A claim may be accepted without a TIA with concurrence and approval from the Owner, RPR, and the Design Consultant. This provision shall cease at the time of Substantial Completion.

The "Normal" number of adverse weather days per month is defined by Local Climatological Data prepared by the National Oceanic and Atmospheric Administration (NOAA). NOAA defines "Normal" weather days based on a period of the previous three decades. The Contractor shall anticipate and expect adverse weather for the number of calendar days listed below. These days should be shown in the contractors prepared base-line schedule as "Non-Working Weather Days". Suspension of construction activity for the number of days each month as listed in the Standard Baseline is included in the Work and is not eligible for extension of Contract Time. Time extension claims shall be determined per each month, for the number of days lost per that month, that exceed the monthly days listed below.

Anticipated "Normal" adverse weather days (Standard Baseline) established for this contract is as follows:

	0.10 Inch or More Precipitation		0.10 Inch or More Precipitation
January	10	July	7
February	10	August	6
March	7	September	9
April	8	October	6
May	12	November	5
June	8	December	8
<b>POTENTIAL ADVERSE WEATHER DAYS</b>			<b>96</b>

An "Adverse Weather Day" is defined as the occurrence of one or more of the conditions below which prevents exterior construction activity or access to the site within twenty-four (24) hours including a weekend day or holiday provided that the Contractor has scheduled construction activities that day. Scheduled construction activities are defined as those activities that are detailed and planned in the Contractor's weekly construction progress meetings. No consideration for an adverse weather day will be granted for which no construction activities are scheduled.

1. Precipitation (rain, snow, or ice) in excess of one-tenth (0.10") liquid measure;
2. Temperatures which do not rise above 32 degrees F by 10:00 a.m.;
3. Temperatures which do not rise above that specified for the day's construction activity by 10:00 a.m., if any is specified;
4. Sustained wind in excess of twenty-five (25) m.p.h.;
5. Standing snow in excess of one inch (1.00");
6. Any day that the Owner has requested no work to be performed.

A Weather Delay Day may be counted if adverse weather prevents work on the project for fifty percent (50%) or more of the Contractor's scheduled work day, including a weekend day or holiday provided that the Contractor has scheduled construction activity that day. No consideration for a weather delay day will be granted for which no construction activities are scheduled.

Adverse Weather may include "dry-out" or "mud" days, as determined by the Engineer such as:

1. For rain days above the standard baseline.
2. Only if there is a hindrance to site access or sitework, such as excavation, embankment, backfill, paving operations, etc. (see 4. & 5. below).
3. At a rate no greater than one (1) make-up day for each day or consecutive days of rain beyond the standard baseline that total 0.1 inch or more, liquid measure, if no substantial work is possible (see 4. & 5. below), unless specifically recommended otherwise by the Engineer.
4. If the Contractor's activity is limited to approximately 50% of the Contractor's activity before the Adverse Weather occurrence, then one half (1/2) a weather delay day will be counted. For example, if the Contractor is disking excavation and embankment areas to dry in situ moisture in the soils or hauling and placing unclassified excavation or borrow material to the embankment before an Adverse Weather occurrence, but is able to continue disking excavation and embankment areas or placing unclassified excavation or borrow material, one half (1/2) a Weather Delay Day will be allowed.
5. If the Contractor's activity is limited to only minor activity when compared to the Contractor's activity before the Adverse Weather occurrence, then one (1) weather delay day will be counted. For example, if the Contractor is disking excavation and embankment areas to dry in situ soils, hauling borrow material to embankment before an Adverse Weather occurrence, but is only able to disk excavation and embankment areas to dry them due to the Adverse Weather occurrence, one (1) Weather Delay Day will be allowed.

If the Contractor is able to only perform disking operations to dry excavation and embankment areas due to in situ moisture conditions in the soil, this is not considered an Adverse Weather occurrence or a Weather Delay Day and is considered to be part of normal construction activities whether any other work can be performed or not.

The Engineer will compile monthly weather data from the Local National Weather Station located at the Airport's Air Traffic Control Tower.

The determination of Contractor's entitlement for any Adverse Weather and Weather Delay days, as defined hereinabove, will be based on the entire construction duration of the phase in lieu of a month-by-month consideration. The entitlements will consider those months that conditions are better or worse than the Standard Baseline established for this contract.

For example:

1. Assume that the total number of standard baseline days for a hypothetical Phase is forty one (41) days and there are thirty six (36) days with precipitation in excess of one tenth inch (0.10") liquid measure and ten (10) weather delay days. Four (4) of the thirty six (36) days with precipitation in excess of one tenth inch (0.10") occurred on Sundays and the Contractor did not plan to work on the Sundays. The summation of the number of adverse weather plus weather delay days granted would be forty (42). This is determined by taking the 36 adverse weather days and subtracting the 4 adverse weather days that occurred on Sundays when the contractor planned no work and then adding the 10 weather delay days (on which the contractor had planned work activities) which sums to a total of forty two (42) adverse weather plus weather delay days. This would amount to one (1) day in excess of the total baseline days for that hypothetical Phase. One (1) additional day will be added to the time for that Phase.

2. If the total standard baseline for a Phase is forty one (41) days and there are twenty eight (28) days with precipitation in excess of one tenth inch (0.10”) liquid measure and nine (9) weather delay days, giving a total of thirty seven (37) rain and weather delay days. This would amount to four (4) days better than the total baseline days for that Phase. Four (4) days will be deducted from the time for that Phase.

Baseline days will be prorated when partial months are a part of a phase/stage or the overall contract time.

For example:

1. If the contract or a phase begins on April 11, including April 11, there are twenty (20) calendar days remaining in April. Twenty (20) remaining calendar days divided by thirty (30) total calendar days in April equals 0.6667. Six (6) total baseline days established for April multiplied times 0.6667 equals four (4) baseline days for the remaining twenty calendar days in April.

See table above for anticipated number of days of lost construction time for each month.

1. To calculate any liquidated damages for a phase/stage that is not completed on time, the number of baseline days for the actual total construction time for that phase/stage will be calculated from the standard baseline.
2. The number of weather delay days for the actual total construction time for that phase/stage will be calculated.
3. The difference in weather delay days and baseline days will then be calculated. Months that have less weather delay days than baseline days will result in a negative number.
4. The resulting difference will then be added to the contract time for the phase/stage.
5. The difference in the actual total construction time plus weather delay days in excess of the baseline for that phase/stage will determine if and what the actual amount of liquidated damages for that phase/stage will be.

The following is an example of calculating weather delay time. This example assumes that all adverse weather + weather delay days occurred on days that the contractor had planned work activities. Using a hypothetical Phase 1 with a total number of 60 consecutive calendar days for the Phase 1 work and a Notice-to-Proceed date of July 10, 2003 and a hypothetical number of actual weather delay days as follows:

FROM	TO	HISTORICAL BASELINE DAYS	ADVERSE WEATHER + WEATHER DELAY DAYS	NUMBER OF DAYS IN EXCESS OF BASELINE
July 10, 2004	July 31, 2004	5	3	-2
Aug. 1, 2004	Aug. 31, 2004	7	11	+4
Sept. 1, 2004	Sept. 8, 2004	1	4	+3
		13	18	+5
Phase 1 Contract Time				60

Phase 1 Contract Time + Number Of Weather Delay Days In Excess Of Baseline	65
Phase 1 Actual Construction Time	67
Phase 1 Days Of Liquidated Damages	2

Throughout the duration of the contract, the Contractor and the Resident Project Representative shall reconcile impacts due to weather on a monthly basis. The Contractor shall submit monthly with each pay request an itemized list of days impacted by the weather, scheduled activity that was impacted and the particular impact which caused the delay (temperature, rain, mud, snow, etc.)

**40.18 Time Impact Analysis.** When changes are initiated or impacts are experienced, the Contractor shall submit to the Owner a written time impact analysis describing the influence of each change or impact. A “time impact analysis” is an evaluation of the effects of changes in the construction sequence, contract, plans, or site conditions on the Contractor's plan for constructing the project, as represented by the schedule. The purpose of the time impact analysis is to determine if the overall project has been delayed, and if necessary, to provide the Contractor and the Owner and RPR a basis for adjusting the contract.

A time impact analysis shall consist of one or all the steps listed below:

1. Establish the status of the project before the impact using the most recent project schedule update prior to the impact occurrence.
2. Predict the effect of the impact on the most recent project schedule update prior to the impact occurrence. This requires estimating the duration of the impact and inserting the impact into the schedule update. Any other changes made to the schedule including modifications to the calendars or constraints shall be noted.
3. Track the effects of the impact on the schedule during its occurrence. Note any changes in sequencing, and mitigation efforts.
4. Compare the status of the work prior to the impact (Step 1) to the prediction of the effect of the impact (Step 2), and to the status of the work during and after the effects of the impact are over (Step 3).

Note that if an impact causes a lack of access to a portion of the project, the effects of the impact may extend to include a reasonable period for remobilization.

The time impact analysis shall be electronically submitted to the Owner and RPR. If the Project Schedule is revised after the submittal of a time impact analysis but prior to its approval, the Contractor shall promptly indicate in writing to the Owner and RPR the need for any modification to its time impact analysis. One (1) copy of each time impact analysis shall be submitted within fourteen (14) calendar days after the completion of an impact. The Owner and RPR may require Step 1 and Step 2 of the time impact analysis be submitted at the commencement of the impact, if needed to decide regarding the suspension of contract time. Approval or rejection of each time impact analysis by the Owner and RPR shall be made within fourteen (14) calendar days after receipt unless subsequent meetings and negotiations are necessary.

#### END OF SPECIAL PROVISION 40

## Section 50 Sequence of Construction and Liquidated Damages

### 50.1 Summary

- A. This section describes the sequence of construction of the various phases of the project and sets forth the liquidated damages of each phase.
- B. Related Work: Documents affecting work of this Section include, but are not necessarily limited to the General Contract Provisions, Special Contract Provisions, Construction Safety and Phasing Plan (CSSP) and other miscellaneous sections of these specifications.

### 50.2 Phases and Liquidated Damages

- A. The work shall be completed within the Contract Time as stipulated below. Completion includes all work shown on the plans in accordance with the Contract Documents & Technical Specifications.
- B. The Runway Safety Area (RSA) is 250 feet wide, either side of the centerline of Runway 4-22. No work is allowed within 250' from the runway centerline unless the runway is closed and an appropriate NOTAM is issued by the Owner.
- C. Contractor's men and equipment will not be allowed within 250' of the runway centerline when visibility approaches or drops below  $\frac{3}{4}$  mile.
- D. Delay in issuance of NTP shall not be the basis for a claim for delay or for additional mobilization costs.
- E. Work during this contract, including contractor personal and equipment, will only be allowed within 250 feet from the centerline of Runway 4-22 during runway closures. Access to these areas when Runway 4-22 is operational will only be permitted with approval and clearance from the Airport Traffic Control and Airport Operations, and after all necessary notifications and provisions are completed.
- F. The OWNER and the CONTRACTOR recognize that time is an essential element of this contract and that delay in completing this project will result in damages due to public inconvenience, obstruction to aviation and vehicular traffic, interference with businesses both on and off the airport, reduced revenue to the Airport, and increased costs to the OWNER, associated with engineering services, inspections, and project administration. It is therefore agreed that in view of the difficulty of making a precise determination of such damages, the CONTRACTOR will pay the OWNER, sums of money in the amounts herein stipulated, not as a penalty, but as Liquidated Damages for not meeting the schedule for specific project milestones.
- G. Critical Project Milestones will be established and agreed to.
- H. Detailed description of the project work for each phase shall be included in the Construction Safety and Phasing Plan (CSPP).
- I. The limits of the project are shown on the phasing and safety plan drawings.

### 50.3 Liquidated Damages

- A. For these Project Milestones, the OWNER and the CONTRACTOR have, in good faith, agreed to Liquidated Damages as set forth below, in lieu of actual damages.
- B. If the CONTRACTOR fails to deliver equipment or materials, or perform any services within the times specified in this Contract to achieve the established Milestones, Dates, Duration or any extensions granted in writing, the CONTRACTOR shall pay to the OWNER as fixed and agreed, Liquidated Damages, the sum (s) specified below:

Contract Working Days

All work must be completed within the agreed upon timeframe from the Construction Notice-to-Proceed commencement date.

- C. Application of Liquidated Damages is not a Change to the Contract. The application of Liquidated Damages to one Phase shall not effect a change in the subsequent Contract Phase dates or relieve responsibility of CONTRACTOR to meet all construction schedules. If multiple Phase dates are missed, Liquidated Damages for more than one Milestone may be imposed concurrently.
- D. If Liquidated Damages are imposed, the OWNER shall deduct the same from any amounts due the CONTRACTOR at the time Liquidated Damages are imposed. If sufficient amounts are not due to the CONTRACTOR to cover such Liquidated Damages, then the OWNER shall invoice the CONTRACTOR for the amounts due to the OWNER. Such invoices shall become due and payable immediately upon receipt by the CONTRACTOR.
- E. Liquidated Damages are in addition to any other damages, penalties, or retainage, which may be assessed and withheld under other provisions of this contract.
  - 1. Daylight hours are defined as starting at 6:00 a.m. local time and ending at 9:00 p.m. local time.
  - 2. Nighttime hours for Runway work are defined as starting at 12:00 a.m. local time and ending at 5:30 a.m. local time.
  - 3. All times shall be local time as determined by the Engineer's atomic clock.
  - 4. The Owner reserves the right to prohibit the Contractor from working in certain areas of the Aircraft Operations Area (AOA) during periods of inclement and/or Instrument Flight Rules (IFR) weather conditions in order to maintain safety for aircraft operations.
  - 5. "Completion" shall be defined as work that is 100% complete including all major punch list items. The Engineer shall make the final determination as to completion. If the Engineer determines that construction activities are not complete by the required completion date, then the Owner intends to assess liquidated damages for the full extent of non-excusable delays, past the Completion Date, until the Engineer determines that the construction activities are complete. The Owner may deduct liquidated damages accrued during any month from the Contractor's pay request for that month or accrue such liquidated damages until the final pay application.
  - 6. If the Contractor experiences weather related delays, they shall submit a report documenting the weather conditions and delays, if any, experienced during the month. Claims for weather related delays shall be submitted by the end of the month in which they occur.
  - 7. If the Contractor is prevented from working due to any other legitimate reason beyond Contractor's control the Contractor shall notify the Engineer in writing of the delay and request a corresponding increase in the schedule. The Engineer and Owner shall be the sole judge as to whether or not a request for extension is legitimate.
  - 8. The Owner reserves the right to adjust project limits and sequence of work to accommodate availability and airfield operations at no additional cost to the Owner.

**END OF SPECIAL PROVISION 50**

**SECTION 23 05 23**  
**GENERAL-DUTY VALVES FOR HVAC PIPING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Globe valves.
- B. Ball valves.
- C. Butterfly valves.
- D. Check valves.

**1.02 REFERENCE STANDARDS**

- A. ASME B1.20.1 - Pipe Threads, General Purpose, Inch; 2013 (Reaffirmed 2018).
- B. ASME B16.1 - Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250; 2020.
- C. ASME B16.5 - Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24 Metric/Inch Standard; 2020.
- D. ASME B31.9 - Building Services Piping; 2020.
- E. ASTM B62 - Standard Specification for Composition Bronze or Ounce Metal Castings; 2017.
- F. MSS SP-80 - Bronze Gate, Globe, Angle, and Check Valves; 2019.
- G. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 2010, with Errata .

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on valves including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.
- C. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- D. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, maintenance and repair data, and parts listings.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer:
  - 1. Obtain valves for each valve type from single manufacturer.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Prepare valves for shipping as follows:
- B. Use the following precautions during storage:
  - 1. Maintain valve end protection and protect flanges and specialties from dirt.
    - a. Provide temporary inlet and outlet caps.

**PART 2 PRODUCTS**

**2.01 APPLICATIONS**

- A. Listed pipe sizes shown using nominal pipe sizes (NPS) and nominal diameter (DN).
- B. Provide the following valves for the applications if not indicated on drawings:
  - 1. Throttling (Hydronic): Butterfly, Ball, Globe, and Angle.
  - 2. Isolation (Shutoff): Butterfly and Ball.
- C. Substitutions of valves with higher CWP classes or WSP ratings for same valve types are permitted when specified CWP ratings or WSP classes are not available.
- D. Chilled Water Valves:
  - 1. Size 2 inch (50 mm, DN) and Smaller, Brass and Bronze Valves:

- a. Threaded ends.
  - b. Ball: Full port, one piece, brass trim.
  - c. Globe: Bronze disc, Class 125.
- E. Heating Hot Water Valves:
- 1. Size 2 inch (50 mm, DN) and Smaller, Brass and Bronze Valves:
    - a. Threaded ends.
    - b. Ball: Full port, one piece, brass trim.
  - 2. Size 2-1/2 inch (65 mm, DN) and Larger, Iron Valves:
    - a. 2-1/2 inch (65 mm, DN) to 4 inch (100 mm, DN): Threaded ends.

## **2.02 GENERAL REQUIREMENTS**

- A. Valve Pressure and Temperature Ratings: No less than rating indicated; as required for system pressures and temperatures.
- B. Valve Sizes: Match upstream piping unless otherwise indicated.
- C. Valve Actuator Types:
  - 1. Hand Lever: Quarter-turn valves 6 inch (150 mm, DN) and smaller.
- D. Valve-End Connections:
  - 1. Threaded End Valves: ASME B1.20.1.
  - 2. Flanges on Iron Valves: ASME B16.1 for flanges on iron valves.
  - 3. Pipe Flanges and Flanged Fittings 1/2 inch (15 mm, DN) through 24 inch (600 mm, DN): ASME B16.5.
- E. General ASME Compliance:
  - 1. Building Services Piping Valves: ASME B31.9.

## **2.03 BRONZE, GLOBE VALVES**

- A. CWP Rating: Class 125: 200 psi (1,380 kPa):
  - 1. Comply with MSS SP-80, Type 1.
  - 2. Body: Bronze; ASTM B62, with integral seat and screw in bonnet.
  - 3. Ends: Threaded or solder joint.
  - 4. Stem and Disc: Bronze or PTFE.
  - 5. Packing: Asbestos free.
  - 6. Handwheel: Malleable iron.

## **2.04 BRASS, BALL VALVES**

- A. One Piece, Full Port with Brass Trim and Push-to-fit or Threaded Connections:
  - 1. Comply with MSS SP-110.
  - 2. CWP Rating: 200 psi (1,379 kPa).
  - 3. Body: Forged brass.
  - 4. Ends: Threaded.
  - 5. Seats: PTFE or TFE.
  - 6. Stem: Brass.
  - 7. Ball: Chrome-plated brass.
- B. Two Piece, Full Port with Stainless Steel Trim and Female Thread, Male thread, or Solder Connections:
  - 1. Comply with MSS SP-110.
  - 2. SWP Rating: 150 psi (1,035 kPa).
  - 3. WOG Rating: 600 psi (4,140 kPa).
  - 4. Vacuum Rating: 28.9 in-Hg (97.9 kPa).
  - 5. Body: Forged brass.
  - 6. Seats: PTFE.
  - 7. Stem: Stainless Steel.
  - 8. Ball: Chrome-plated brass.



## **2.05 STAINLESS STEEL, BALL VALVES**

- A. One-Piece, Standard Port with Stainless-Steel Trim:
  - 1. Comply with MSS SP-110.
  - 2. WSP Rating: 150 psi (1,035 kPa).
  - 3. CWP Rating: 1,000 psi (6,895 kPa).
  - 4. Seats: PTFE.
  - 5. Stem: Stainless steel, blowout proof.
  - 6. Ball: Stainless steel.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Provide unions or flanges with valves to facilitate equipment removal and maintenance while maintaining system operation and full accessibility for servicing.
- B. Provide separate valve support as required and locate valve with stem at or above center of piping, maintaining unimpeded stem movement.

**END OF SECTION**

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**SECTION 23 05 29**  
**HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Support and attachment components.
- B. Retrofit piping cover system.

**1.02 REFERENCE STANDARDS**

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- D. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2023.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- F. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for channel (strut) framing systems, nonpenetrating rooftop supports, post-installed concrete and masonry anchors, and thermal insulated pipe supports.

**PART 2 PRODUCTS**

**2.01 SUPPORT AND ATTACHMENT COMPONENTS**

- A. General Requirements:
  - 1. Provide all required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for the complete installation of plumbing work.
  - 2. Provide products listed, classified, and labeled as suitable for the purpose intended, where applicable.
  - 3. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported. Include consideration for vibration, equipment operation, and shock loads where applicable.
  - 4. Steel Components: Use corrosion resistant materials suitable for the environment where installed.
    - a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
    - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
    - c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
    - d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.
- B. Prefabricated Trapeze-Framed Metal Strut Systems:
  - 1. Strut Channel or Bracket Material:
    - a. Indoor Dry Locations: Use painted steel, zinc-plated steel, or galvanized steel.

2. Accessories: Provide bracket covers, cable basket clips, cable tray clips, clamps, conduit clamps, fire-retarding brackets, j-hooks, protectors, and vibration dampeners.
- C. Strut Channels:
  1. Manufacturers:
    - a. B-Line, a brand of Eaton Corporation: [www.eaton.com/#sle](http://www.eaton.com/#sle).
    - b. Gripple, Inc; Universal Bracket: [www.gripple.com/#sle](http://www.gripple.com/#sle).
    - c. Unistrut, a brand of Atkore International Inc: [www.unistrut.com/#sle](http://www.unistrut.com/#sle).
  2. ASTM A653/A653M galvanized steel bracket with clamps for surface mounting of piping or plumbing equipment support.
  3. Channel or Bracket Kits: Include rods, brackets, end-fixed fittings, covers, clips, and other related hardware required to complete sectional trapeze section for piping or other support.
- D. Hanger Rods:
  1. Threaded zinc-plated steel unless otherwise indicated.
  2. Minimum Size, Unless Otherwise Indicated or Required:
    - a. Equipment Supports: 1/2 inch (13 mm) diameter.
    - b. Piping up to 1 inch (25 mm, DN): 1/4 inch (6 mm) diameter.
    - c. Piping larger than 1 inch (25 mm, DN): 3/8 inch (10 mm) diameter.
- E. Pipe Shields for Insulated Piping:
  1. General Construction and Requirements:
    - a. Surface Burning Characteristics: Comply with ASTM E84 or UL 723.
    - b. Shields Material: UV-resistant polypropylene with glass fill.
    - c. Maximum Insulated Pipe Outer Diameter: 12-5/8 inch (321 mm).
    - d. Minimum Service Temperature: Minus 40 degrees F (Minus 40 degrees C).
    - e. Maximum Service Temperature: 178 degrees F (81 degrees C).
    - f. Pipe shields to be provided at hanger, support, and guide locations on pipe requiring insulation or additional support.
- F. Anchors and Fasteners:
  1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.

## **2.02 RETROFIT PIPING COVER SYSTEM**

- A. General Requirements:
  1. Surface Burning Characteristics: Flame spread index/smoke developed index of 20/250, maximum, when tested in accordance with ASTM E84 or UL 723.
- B. Materials:
  1. Piping Cover System: Removal-resistant, modular, snap-fit cover units, clips, and anchors for use with CPVC, steel, and copper piping systems.
  2. Cover Units: L-shaped and U-shaped cross-section units of flame retardant resin material, paintable finish.
  3. Unit Length: 7.5 feet (2.29 m).
  4. Provide coupling fittings for joining units end to end and prefabricated inside and outside corner fittings and end caps as required.
  5. Provide mounting clips to secure covers to wall-ceiling per manufacturer requirements.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive support and attachment components.
- C. Verify that conditions are satisfactory for installation prior to starting work.

### **3.02 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Provide independent support from building structure. Do not provide support from piping, ductwork, conduit, or other systems.
- C. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.
- D. Unless specifically indicated or approved by Architect, do not provide support from roof deck.
- E. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- F. Equipment Support and Attachment:
  - 1. Use metal fabricated supports or supports assembled from metal channel (strut) to support equipment as required.
  - 2. Use metal channel (strut) secured to studs to support equipment surface-mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
  - 3. Use metal channel (strut) to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
  - 4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
- G. Secure fasteners according to manufacturer's recommended torque settings.
- H. Remove temporary supports.

### **END OF SECTION**

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**SECTION 23 05 93**  
**TESTING, ADJUSTING, AND BALANCING FOR HVAC**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Testing, adjustment, and balancing of air systems.
- B. Testing, adjustment, and balancing of hydronic systems.

**1.02 REFERENCE STANDARDS**

- A. AABC (NSTSB) - AABC National Standards for Total System Balance, 7th Edition; 2016.
- B. ASHRAE Std 111 - Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems; 2024.
- C. SMACNA (TAB) - HVAC Systems Testing, Adjusting and Balancing; 2023.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. TAB Plan: Submit a written plan indicating the testing, adjusting, and balancing standard to be followed and the specific approach for each system and component.
  - 1. Include at least the following in the plan:
    - a. Preface: An explanation of the intended use of the control system.
    - b. List of all air flow, water flow, sound level, system capacity and efficiency measurements to be performed and a description of specific test procedures, parameters, formulas to be used.
    - c. Copy of field checkout sheets and logs to be used, listing each piece of equipment to be tested, adjusted and balanced with the data cells to be gathered for each.
    - d. Discussion of what notations and markings will be made on the duct and piping drawings during the process.
    - e. Final test report forms to be used.
    - f. Procedures for formal deficiency reports, including scope, frequency and distribution.
- C. Final Report: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
  - 1. Revise TAB plan to reflect actual procedures and submit as part of final report.
  - 2. Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect and for inclusion in operating and maintenance manuals.
  - 3. Include actual instrument list, with manufacturer name, serial number, and date of calibration.
  - 4. Form of Test Reports: Where the TAB standard being followed recommends a report format use that; otherwise, follow ASHRAE Std 111.
  - 5. Units of Measure: Report data in both I-P (inch-pound) and SI (metric) units.
  - 6. Include the following on the title page of each report:
    - a. Name of Testing, Adjusting, and Balancing Agency.
    - b. Address of Testing, Adjusting, and Balancing Agency.
    - c. Telephone number of Testing, Adjusting, and Balancing Agency.
    - d. Project name.
    - e. Project location.
    - f. Project Engineer.
    - g. Project Contractor.
    - h. Report date.
- D. Project Record Documents: Record actual locations of flow measuring stations and balancing valves and rough setting.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION**

### **3.01 GENERAL REQUIREMENTS**

- A. Perform total system balance in accordance with one of the following:
  - 1. AABC (NSTSB), AABC National Standards for Total System Balance.
  - 2. ASHRAE Std 111, Practices for Measurement, Testing, Adjusting and Balancing of Building Heating, Ventilation, Air-Conditioning, and Refrigeration Systems.
  - 3. SMACNA (TAB).
- B. Begin work after completion of systems to be tested, adjusted, or balanced and complete work prior to Substantial Completion of the project.
- C. Where HVAC systems and/or components interface with life safety systems, including fire and smoke detection, alarm, and control, coordinate scheduling and testing and inspection procedures with the authorities having jurisdiction.
- D. TAB Agency Qualifications:
  - 1. Company specializing in the testing, adjusting, and balancing of systems specified in this section.
  - 2. Certified by one of the following:
    - a. AABC, Associated Air Balance Council: [www.aabc.com/#sle](http://www.aabc.com/#sle); upon completion submit AABC National Performance Guaranty.
    - b. TABB, The Testing, Adjusting, and Balancing Bureau of National Energy Management Institute: [www.tabbcertified.org/#sle](http://www.tabbcertified.org/#sle).
- E. TAB Supervisor and Technician Qualifications: Certified by same organization as TAB agency.

### **3.02 EXAMINATION**

- A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:
  - 1. Systems are started and operating in a safe and normal condition.
  - 2. Temperature control systems are installed complete and operable.
  - 3. Proper thermal overload protection is in place for electrical equipment.
  - 4. Final filters are clean and in place. If required, install temporary media in addition to final filters.
  - 5. Duct systems are clean of debris.
  - 6. Fans are rotating correctly.
  - 7. Fire and volume dampers are in place and open.
  - 8. Air coil fins are cleaned and combed.
  - 9. Access doors are closed and duct end caps are in place.
  - 10. Air outlets are installed and connected.
  - 11. Duct system leakage is minimized.
  - 12. Hydronic systems are flushed, filled, and vented.
  - 13. Pumps are rotating correctly.
  - 14. Proper strainer baskets are clean and in place.
  - 15. Service and balance valves are open.
- B. Submit field reports. Report defects and deficiencies that will or could prevent proper system balance.
- C. Beginning of work means acceptance of existing conditions.

### **3.03 PREPARATION**

- A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to Owner/Engineer to facilitate spot checks during testing.
- B. Provide additional balancing devices as required.



### **3.04 ADJUSTMENT TOLERANCES**

- A. Air Handling Systems: Adjust to within plus or minus 5 percent of design for supply systems and plus or minus 10 percent of design for return and exhaust systems.
- B. Hydronic Systems: Adjust to within plus or minus 10 percent of design.

### **3.05 RECORDING AND ADJUSTING**

- A. Ensure recorded data represents actual measured or observed conditions.
- B. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.
- C. Mark on drawings the locations where traverse and other critical measurements were taken and cross reference the location in the final report.
- D. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.
- E. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.

### **3.06 AIR SYSTEM PROCEDURE**

- A. Adjust air handling and distribution systems to provide required or design supply, return, and exhaust air quantities at site altitude.
- B. Make air quantity measurements in ducts by Pitot tube traverse of entire cross sectional area of duct.
- C. Adjust distribution system to obtain uniform space temperatures free from objectionable drafts and noise.
- D. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.
- E. Vary total system air quantities by adjustment of fan speeds. Provide drive changes required. Vary branch air quantities by damper regulation.
- F. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across the fan. Make allowances for 50 percent loading of filters.
- G. Adjust outside air automatic dampers, outside air, return air, and exhaust dampers for design conditions.

### **3.07 WATER SYSTEM PROCEDURE**

- A. Adjust water systems to provide required or design quantities.
- B. Use calibrated Venturi tubes, orifices, or other metered fittings and pressure gauges to determine flow rates for system balance. Where flow metering devices are not installed, base flow balance on temperature difference across various heat transfer elements in the system.
- C. Adjust systems to provide specified pressure drops and flows through heat transfer elements prior to thermal testing. Perform balancing by measurement of temperature differential in conjunction with air balancing.

### **3.08 SCOPE**

- A. Test, adjust, and balance the following:
  - 1. Air Handling Units.

### **3.09 MINIMUM DATA TO BE REPORTED**

- A. Electric Motors:
  - 1. Manufacturer.
  - 2. Model/Frame.
  - 3. HP/BHP.

4. Phase, voltage, amperage; nameplate, actual, no load.
5. RPM.
6. Service factor.
7. Starter size, rating, heater elements.
- B. Cooling Coils:
  1. Air flow, design and actual.
  2. Entering air DB temperature, design and actual.
  3. Entering air WB temperature, design and actual.
  4. Leaving air DB temperature, design and actual.
  5. Leaving air WB temperature, design and actual.
  6. Water flow, design and actual.
  7. Water pressure drop, design and actual.
  8. Entering water temperature, design and actual.
  9. Leaving water temperature, design and actual.
  10. Air pressure drop, design and actual.
- C. Heating Coils:
  1. Location.
  2. Service.
  3. Air flow, design and actual.
  4. Water flow, design and actual.
  5. Water pressure drop, design and actual.
  6. Entering water temperature, design and actual.
  7. Leaving water temperature, design and actual.
  8. Entering air temperature, design and actual.
  9. Leaving air temperature, design and actual.
  10. Air pressure drop, design and actual.
- D. Air Moving Equipment:
  1. Manufacturer.
  2. Model number.
  3. Air flow, specified and actual.
  4. Return air flow, specified and actual.
  5. Outside air flow, specified and actual.
  6. Total static pressure (total external), specified and actual.
  7. Inlet pressure.
  8. Discharge pressure.
- E. Return Air/Outside Air:
  1. Design air flow.
  2. Actual air flow.
  3. Design return air flow.
  4. Actual return air flow.
  5. Design outside air flow.
  6. Actual outside air flow.
  7. Return air temperature.
  8. Outside air temperature.
- F. Duct Traverses:
  1. System zone/branch.
  2. Duct size.
  3. Area.
  4. Design velocity.
  5. Design air flow.
  6. Test velocity.

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7. Test air flow.

**END OF SECTION**

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## **SECTION 23 07 13 DUCT INSULATION**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Duct insulation.

#### **1.02 REFERENCE STANDARDS**

- A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.
- B. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2013 (Reapproved 2019).
- C. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation; 2014 (Reapproved 2019).
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- E. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

#### **1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.

#### **1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Accept materials on site in original factory packaging, labelled with manufacturer's identification, including product density and thickness.
- B. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.

#### **1.05 FIELD CONDITIONS**

- A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.
- B. Maintain temperature during and after installation for minimum period of 24 hours.

### **PART 2 PRODUCTS**

#### **2.01 REGULATORY REQUIREMENTS**

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

#### **2.02 GLASS FIBER, FLEXIBLE**

- A. Manufacturer:
  - 1. CertainTeed Corporation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
  - 2. Johns Manville: [www.jm.com/#sle](http://www.jm.com/#sle).
  - 3. Knauf Insulation; Performance+ Duct Wrap: [www.knaufinsulation.com/#sle](http://www.knaufinsulation.com/#sle).
- B. Insulation: ASTM C553; flexible, noncombustible blanket.
  - 1. K (Ksi) value: 0.36 at 75 degrees F (0.052 at 24 degrees C), when tested in accordance with ASTM C518.
  - 2. Provide a minimum of 1.5 inch thick insulation with vapor barrier

#### **2.03 GLASS FIBER, RIGID**

- A. Manufacturer:
  - 1. CertainTeed Corporation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).

2. Johns Manville: [www.jm.com/#sle](http://www.jm.com/#sle).
3. Knauf Insulation; Earthwool Insulation Board: [www.knaufinsulation.com/#sle](http://www.knaufinsulation.com/#sle).
- B. Insulation: ASTM C612; rigid, noncombustible.
  1. K (Ksi) Value: 0.24 at 75 degrees F (0.036 at 24 degrees C), when tested in accordance with ASTM C518.
  2. Maximum Service Temperature: 450 degrees F (232 degrees C).
  3. Maximum Water Vapor Absorption: 5.0 percent.
  4. Maximum Density: 8.0 pcf (128 kg/cu m).
  5. Provide a minimum of 1.5 inch thick insulation with vapor barrier.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Test ductwork for design pressure prior to applying insulation materials.
- B. Verify that surfaces are clean, foreign material removed, and dry.

### **3.02 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NAIMA National Insulation Standards.
- C. Insulated Ducts Conveying Air Below Ambient Temperature:
  1. Provide insulation with vapor barrier jackets.
  2. Finish with tape and vapor barrier jacket.
- D. Insulated Ducts Conveying Air Above Ambient Temperature:
  1. Provide with standard vapor barrier jacket.
- E. Ducts Exposed in Mechanical Equipment Rooms or Finished Spaces (below 10 feet above finished floor) ((below 3 meters above finished floor)): Finish with canvas jacket sized for finish painting.
- F. External Duct Insulation Application:
  1. Secure insulation with vapor barrier with wires and seal jacket joints with vapor barrier adhesive or tape to match jacket.
  2. Secure insulation without vapor barrier with staples, tape, or wires.
  3. Install without sag on underside of duct. Use adhesive or mechanical fasteners where necessary to prevent sagging. Lift duct off trapeze hangers and insert spacers.
  4. Seal vapor barrier penetrations by mechanical fasteners with vapor barrier adhesive.

### **3.03 SCHEDULES**

- A. Exhaust Ducts Within 10 ft (3 m) of Exterior Openings: flexible or rigid insulation
- B. Outside Air Intake Ducts: flexible or rigid insulation
- C. Supply Ducts: flexible or rigid insulation
- D. Return and Relief Ducts in Mechanical Rooms: flexible or rigid insulation

### **END OF SECTION**

**SECTION 23 07 19  
HVAC PIPING INSULATION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Piping insulation.
- B. Flexible removable and reusable blanket insulation.

**1.02 REFERENCE STANDARDS**

- A. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus; 2019, with Editorial Revision (2023).
- B. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation; 2022a.
- C. ASTM C795 - Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel; 2008 (Reapproved 2023).
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- E. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with not less than three years of documented experience.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Accept materials on site, labeled with manufacturer's identification, product density, and thickness.

**1.06 FIELD CONDITIONS**

- A. Maintain ambient conditions required by manufacturers of each product.
- B. Maintain temperature before, during, and after installation for minimum of 24 hours.

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS**

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

**2.02 GLASS FIBER, RIGID**

- A. Manufacturers:
  - 1. CertainTeed Corporation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
  - 2. Johns Manville Corporation: [www.jm.com/#sle](http://www.jm.com/#sle).
  - 3. Knauf Insulation; Earthwool Pipe Insulation: [www.knaufinsulation.com/#sle](http://www.knaufinsulation.com/#sle).
- B. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible.
  - 1. K (Ksi) Value: ASTM C177, 0.24 at 75 degrees F (0.035 at 24 degrees C).
  - 2. Maximum Service Temperature: 850 degrees F (454 degrees C).
  - 3. Maximum Moisture Absorption: 0.2 percent by volume.
  - 4. Provide a minimum of 1.5 inch thick insulation with vapor barrier.

- C. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible, with wicking material to transport condensed water to the outside of the system for evaporation to the atmosphere.
  - 1. K (Ksi) Value: ASTM C177, 0.23 at 75 degrees F (0.034 at 24 degrees C).
  - 2. Maximum Service Temperature: 220 degrees F (104 degrees C).
  - 3. Maximum Moisture Absorption: 0.2 percent by volume.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Test piping for design pressure, liquid tightness, and continuity prior to applying insulation materials.
- B. Verify that surfaces are clean and dry, with foreign material removed.

### **3.02 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NAIMA National Insulation Standards.
- C. Exposed Piping: Locate insulation and cover seams in least visible locations.
- D. Insulated Pipes Conveying Fluids Below Ambient Temperature:
  - 1. Insulate entire system, including fittings, valves, unions, flanges, strainers, flexible connections, pump bodies, and expansion joints.
- E. Glass Fiber Insulated Pipes Conveying Fluids Below Ambient Temperature:
  - 1. Provide vapor barrier jackets, factory-applied or field-applied; secure with self-sealing longitudinal laps and butt strips with pressure-sensitive adhesive. Secure with outward clinch expanding staples and vapor barrier mastic.
  - 2. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. Finish with glass cloth and vapor barrier adhesive or PVC fitting covers.
- F. For hot piping conveying fluids 140 degrees F (60 degrees C) or less, do not insulate flanges and unions at equipment, but bevel and seal ends of insulation.
- G. For hot piping conveying fluids over 140 degrees F (60 degrees C), insulate flanges and unions at equipment.
- H. Glass Fiber Insulated Pipes Conveying Fluids Above Ambient Temperature:
  - 1. Provide standard jackets, with or without vapor barrier, factory-applied, or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure-sensitive adhesive. Secure with outward clinch expanding staples.
  - 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finish with glass cloth and adhesive or PVC fitting covers.
- I. Inserts and Shields:
  - 1. Application: Piping 1-1/2 inches (40 mm) diameter or larger.
  - 2. Shields: Galvanized steel between pipe hangers or pipe hanger rolls and inserts.
  - 3. Insert location: Between support shield and piping and under the finish jacket.
  - 4. Insert Configuration: Minimum 6 inches (150 mm) long, of same thickness and contour as adjoining insulation; may be factory fabricated.

### **3.03 SCHEDULE**

- A. Heating Systems:
  - 1. Heating Water Supply and Return:
- B. Cooling Systems:
  - 1. Chilled Water:

**END OF SECTION**



**SECTION 23 09 23**  
**DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. System description.
- B. Operator interface.
- C. Controllers.
- D. System software.

**1.02 RELATED REQUIREMENTS**

- A. Section 23 09 13 - Instrumentation and Control Devices for HVAC.
- B. Section 23 09 93 - Sequence of Operations for HVAC Controls.
- C. Section 26 05 83 - Wiring Connections: Electrical characteristics and wiring connections.

**1.03 REFERENCE STANDARDS**

- A. ASHRAE Std 135 - BACnet - A Data Communication Protocol for Building Automation and Control Networks; 2024, with Errata (2025).
- B. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Manufacturer's Instructions: Indicate manufacturer's installation instructions for all manufactured components.
- C. Designer's Qualification Statement.
- D. Manufacturer's Qualification Statement.
- E. Installer's Qualification Statement.
- F. Project Record Documents: Record actual locations of control components, including control units, thermostats, and sensors.
  - 1. Revise shop drawings to reflect actual installation and operating sequences.
  - 2. Include submittals data in final "Record Documents" form.
- G. Operation and Maintenance Data:
  - 1. Include interconnection wiring diagrams complete field installed systems with identified and numbered, system components and devices.
  - 2. Include keyboard illustrations and step-by-step procedures indexed for each operator function.
  - 3. Include inspection period, cleaning methods, cleaning materials recommended, and calibration tolerances.
- H. Warranty: Submit manufacturer's warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

**1.05 QUALITY ASSURANCE**

- A. Perform work in accordance with NFPA 70.
- B. Designer Qualifications: Perform design of system using manufacturer's software under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
- C. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.

## **1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Substantial Completion.
- C. Provide five year manufacturer's warranty for field programmable micro-processor based units.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Automated Logic.

### **2.02 SYSTEM DESCRIPTION**

- A. The new AHU controls shall be an extension of the existing building control system.
- B. Automatic temperature control field monitoring and control system using field programmable micro-processor based units.
- C. Base system on distributed system of fully intelligent, stand-alone controllers, operating in a multi-tasking, multi-user environment on token passing network, with central and remote hardware, software, and interconnecting wire and conduit.
- D. Include computer software and hardware, operator input/output devices, control units, local area networks (LAN), sensors, control devices, actuators.
- E. Controls for variable air volume terminals, radiation, reheat coils, unit heaters, fan coils, and the like when directly connected to the control units. Individual terminal unit control is specified in Section 23 09 13.
- F. Provide control systems consisting of thermostats, control valves, dampers and operators, indicating devices, interface equipment and other apparatus and accessories required to operate mechanical systems, and to perform functions specified.
- G. Include installation and calibration, supervision, adjustments, and fine tuning necessary for complete and fully operational system.

### **2.03 OPERATOR INTERFACE**

- A. PC Based Work Station:
- B. Workstation, controllers, and control backbone to communicate using BACnet protocol and addressing.
- C. BACnet protocol to comply with ASHRAE Std 135.
- D. Hardware:
  - 1. The existing operator work station may be reused.

### **2.04 CONTROLLERS**

- A. Building Controllers:
  - 1. General:
    - a. Manage global strategies by one or more, independent, standalone, microprocessor based controllers.
    - b. Provide sufficient memory to support controller's operating system, database, and programming requirements.
    - c. Share data between networked controllers.
    - d. Controller operating system manages input and output communication signals allowing distributed controllers to share real and virtual object information and allowing for central monitoring and alarms.
    - e. Utilize real-time clock for scheduling.
    - f. Continuously check processor status and memory circuits for abnormal operation.
    - g. Controller to assume predetermined failure mode and generate alarm notification upon detection of abnormal operation.
    - h. Communication with other network devices to be based on assigned protocol.

2. Communication:
    - a. Controller to reside on a BACnet network using ISO 8802-3 (ETHERNET) Data Link/Physical layer protocol.
    - b. Perform routing when connected to a network of custom application and application specific controllers.
    - c. Provide service communication port for connection to a portable operator's terminal or hand held device with compatible protocol.
  3. Anticipated Environmental Ambient Conditions:
    - a. Outdoors and/or in Wet Ambient Conditions:
      - 1) Mount within waterproof enclosures.
      - 2) Rated for operation at 40 to 150 degrees F (4 to 65 degrees C).
    - b. Conditioned Space:
      - 1) Mount within dustproof enclosures.
      - 2) Rated for operation at 32 to 120 degrees F (0 to 50 degrees C).
  4. Provisions for Serviceability:
    - a. Diagnostic LEDs for power, communication, and processor.
    - b. Make all wiring connections to field removable, modular terminal strips, or to a termination card connected by a ribbon cable.
  5. Memory: In the event of a power loss, maintain all BIOS and programming information for a minimum of 72 hours.
  6. Power and Noise Immunity:
    - a. Maintain operation at 90 to 110 percent of nominal voltage rating.
    - b. Perform orderly shutdown below 80 percent of nominal voltage.
    - c. Operation protected against electrical noise of 5 to 120 Hz and from keyed radios up to 5 W. at 3 feet (1 m).
- B. Custom Application Controller:
1. General:
    - a. Provide sufficient memory to support controller's operating system, database, and programming requirements.
    - b. Share data between networked, microprocessor based controllers.
    - c. Controller operating system manages input and output communication signals allowing distributed controllers to share real and virtual object information and allowing for central monitoring and alarms.
    - d. Utilize real-time clock for scheduling.
    - e. Continuously check processor status and memory circuits for abnormal operation.
    - f. Controller to assume predetermined failure mode and generate alarm notification upon detection of abnormal operation.
    - g. Communication with other network devices to be based on assigned protocol.
  2. Communication:
    - a. Controller to reside on a BACnet network using MS/TP Data Link/Physical layer protocol.
    - b. Provide service communication port for connection to a portable operator's terminal or hand held device with compatible protocol.
  3. Anticipated Environmental Ambient Conditions:
    - a. Outdoors and/or in Wet Ambient Conditions:
      - 1) Mount within waterproof enclosures.
      - 2) Rated for operation at 40 to 150 degrees F (4 to 65 degrees C).
    - b. Conditioned Space:
      - 1) Mount within dustproof enclosures.
      - 2) Rated for operation at 32 to 120 degrees F (0 to 50 degrees C).
  4. Provisions for Serviceability:
    - a. Diagnostic LED's for power, communication, and processor.

- b. Make all wiring connections to field removable, modular terminal strips, or to a termination card connected by a ribbon cable.
  - 5. Memory: In the event of a power loss, maintain all BIOS and programming information for a minimum of 72 hours.
  - 6. Power and Noise Immunity:
    - a. Maintain operation at 90 to 110 percent of nominal voltage rating.
    - b. Perform orderly shutdown below 80 percent of nominal voltage.
    - c. Operation protected against electrical noise of 5 to 120 Hz and from keyed radios up to 5 W. at 3 feet (1 m).
- C. Application Specific Controllers:
  - 1. General:
    - a. Not fully user programmable, microprocessor based controllers dedicated to control specific equipment.
    - b. Customized for operation within the confines of equipment served.
    - c. Communication with other network devices to be based on assigned protocol.
  - 2. Communication:
    - a. Controller to reside on a BACnet network using MS/TP Data Link/Physical layer protocol.
    - b. Provide service communication port for connection to a portable operator's terminal or hand held device with compatible protocol.
  - 3. Anticipated Environmental Ambient Conditions:
    - a. Outdoors and/or in Wet Ambient Conditions:
      - 1) Mount within waterproof enclosures.
      - 2) Rated for operation at 40 to 150 degrees F (4 to 65 degrees C).
    - b. Conditioned Space:
      - 1) Mount within dustproof enclosures.
      - 2) Rated for operation at 32 to 120 degrees F (0 to 50 degrees C).
  - 4. Provisions for Serviceability:
    - a. Diagnostic LEDs for power, communication, and processor.
    - b. Make all wiring connections to field removable, modular terminal strips, or to a termination card connected by a ribbon cable.
  - 5. Memory: In the event of a power loss, maintain all BIOS and programming information for a minimum of 72 hours.
  - 6. Power and Noise Immunity:
    - a. Maintain operation at 90 to 110 percent of nominal voltage rating.
    - b. Perform orderly shutdown below 80 percent of nominal voltage.
    - c. Operation protected against electrical noise of 5 to 120 Hz and from keyed radios up to 5 W at 3 feet (1 m).
- D. Input/Output Interface:
  - 1. Hardwired inputs and outputs tie into the DDC system through building, custom application, or application specific controllers.
  - 2. All Input/Output Points:
    - a. Protect controller from damage resulting from any point short-circuiting or grounding and from voltage up to 24 volts of any duration.
    - b. Provide universal type for building and custom application controllers where input or output is software designated as either binary or analog type with appropriate properties.
  - 3. Binary Inputs:
    - a. Allow monitoring of On/Off signals from remote devices.
    - b. Provide wetting current of 12 mA minimum, compatible with commonly available control devices and protected against the effects of contact bounce and noise.
    - c. Sense dry contact closure with power provided only by the controller.

4. Pulse Accumulation Input Objects: Comply with all requirements of binary input objects and accept up to 10 pulses per second.
5. Analog Inputs:
  - a. Allow for monitoring of low voltage 0 to 10 VDC, 4 to 20 mA current, or resistance signals (thermistor, RTD).
  - b. Compatible with and field configurable to commonly available sensing devices.
6. Binary Outputs:
  - a. Used for On/Off operation or a pulsed low-voltage signal for pulse width modulation control.
  - b. Outputs provided with three position (On/Off/Auto) override switches.
  - c. Status lights for building and custom application controllers to be selectable for normally open or normally closed operation.
7. Analog Outputs:
  - a. Monitoring signal provides a 0 to 10 VDC or a 4 to 20 mA output signal for end device control.
  - b. Provide status lights and two position (AUTO/MANUAL) switch for building and custom application controllers with manually adjustable potentiometer for manual override on building and custom application controllers.
  - c. Drift to not exceed 0.4 percent of range per year.
8. Tri State Outputs:
  - a. Coordinate two binary outputs to control three point, floating type, electronic actuators without feedback.
  - b. Limit the use of three point, floating devices to the following zone and terminal unit control applications:
  - c. Control algorithms run the zone actuator to one end of its stroke once every 24 hours for verification of operator tracking.
9. System Object Capacity:
  - a. System size to be expandable to twice the number of input output objects required by providing additional controllers, including associated devices and wiring.
  - b. Hardware additions or software revisions for the installed operator interfaces are not to be required for future, system expansions.

## **2.05 LOCAL AREA NETWORK (LAN)**

- A. Provide communication between control units over local area network (LAN).
- B. LAN Capacity: Not less than 60 stations or nodes.
- C. Break in Communication Path: Alarm and automatically initiate LAN reconfiguration.
- D. LAN Data Speed: Minimum 19.2 Kb.
- E. Communication Techniques: Allow interface into network by multiple operation stations and by auto-answer/auto-dial modems. Support communication over telephone lines utilizing modems.
- F. Transmission Median: Fiber optic or single pair of solid 24 gauge twisted, shielded copper cable.
- G. Network Support: Time for global point to be received by any station, shall be less than 3 seconds. Provide automatic reconfiguration if any station is added or lost. If transmission cable is cut, reconfigure two sections with no disruption to system's operation, without operator intervention.

## **2.06 SYSTEM SOFTWARE**

- A. Operating System:
  1. Concurrent, multi-tasking capability.
    - a. Common Software Applications Supported: Microsoft Excel.
  2. System Graphics:

- a. Upgrade and modify AHU graphics to be represent the installation and function of the new equipment.
    - b. Allow up to 10 graphic screens, simultaneously displayed for comparison and monitoring of system status.
    - c. Animation displayed by shifting image files based on object status.
    - d. Provide method for operator with password to perform the following:
      - 1) Move between, change size, and change location of graphic displays.
      - 2) Modify on-line.
      - 3) Add, delete, or change dynamic objects consisting of:
        - (a) Analog and binary values.
        - (b) Dynamic text.
        - (c) Static text.
        - (d) Animation files.
  3. Custom Graphics Generation Package:
    - a. Create, modify, and save graphic files and visio format graphics in PCX formats.
    - b. HTML graphics to support web browser compatible formats.
    - c. Capture or convert graphics from AutoCAD.
- B. Workstation System Applications:
1. Automatic System Database Save and Restore Functions:
    - a. Current database copy of each Building Controller is automatically stored on hard disk.
    - b. Automatic update occurs upon change in any system panel.
    - c. In the event of database loss in any system panel, the first workstation to detect the loss automatically restores the database for that panel unless disabled by the operator.
  2. Manual System Database Save and Restore Functions by Operator with Password Clearance:
    - a. Save database from any system panel.
    - b. Clear a panel database.
    - c. Initiate a download of a specified database to any system panel.
  3. Software provided allows system configuration and future changes or additions by operators under proper password protection.
  4. On-line Help:
    - a. Context-sensitive system assists operator in operation and editing.
    - b. Available for all applications.
    - c. Relevant screen data provided for particular screen display.
    - d. Additional help available via hypertext.
  5. Security:
    - a. Operator log-on requires user name and password to view, edit, add, or delete data.
    - b. System security selectable for each operator.
    - c. System supervisor sets passwords and security levels for all other operators.
    - d. Operator passwords to restrict functions accessible to viewing and/or changing system applications, editor, and object.
    - e. Automatic, operator log-off results from keyboard or mouse inactivity during user-adjustable, time period.
    - f. All system security data stored in encrypted format.
  6. System Diagnostics:
    - a. Operations Automatically Monitored:
      - 1) Workstations.
      - 2) Printers.
      - 3) Modems.
      - 4) Network connections.

- 5) Building management panels.
    - 6) Controllers.
  - b. Device failure is annunciated to the operator.
7. Alarm Processing:
  - a. All system objects are configurable to "alarm in" and "alarm out" of normal state.
  - b. Configurable Objects:
    - 1) Alarm limits.
    - 2) Alarm limit differentials.
    - 3) States.
    - 4) Reactions for each object.
8. Alarm Messages:
  - a. Descriptor: English language.
  - b. Recognizable Features:
    - 1) Source.
    - 2) Location.
    - 3) Nature.
9. Configurable Alarm Reactions by Workstation and Time of Day:
  - a. Logging.
  - b. Printing.
  - c. Starting programs.
  - d. Displaying messages.
  - e. Dialing out to remote locations.
  - f. Paging.
  - g. Providing audible annunciation.
  - h. Displaying specific system graphics.
10. Custom Trend Logs:
  - a. Definable for any data object in the system including interval, start time, and stop time.
  - b. Trend Data:
    - 1) Sampled and stored on the building controller panel.
    - 2) Archivable on hard disk.
    - 3) Retrievable for use in reports, spreadsheets and standard database programs.
    - 4) Archival on LAN accessible storage media including hard disk, tape, Raid array drive, and virtual cloud environment.
    - 5) Protected and encrypted format to prevent manipulation, or editing of historical data and event logs.
11. Alarm and Event Log:
  - a. View all system alarms and change of states from any system location.
  - b. Events listed chronologically.
  - c. Operator with proper security acknowledges and clears alarms.
  - d. Alarms not cleared by operator are archived to the workstation hard disk.
12. Object, Property Status and Control:
  - a. Provide a method to view, edit if applicable, the status of any object and property in the system.
  - b. Status Available by the Following Methods:
    - 1) Menu.
    - 2) Graphics.
    - 3) Custom Programs.
13. Reports and Logs:
  - a. Reporting Package:
    - 1) Allows operator to select, modify, or create reports.
    - 2) Definable as to data content, format, interval, and date.

- 3) Archivable to hard disk.
  - b. Real-time logs available by type or status such as alarm, lockout, normal, etc.
  - c. Stored on hard disk and readily accessible by standard software applications, including spreadsheets and word processing.
  - d. Set to be printed on operator command or specific time(s).
- 14. Reports:
  - a. Standard:
    - 1) Objects with current values.
    - 2) Current alarms not locked out.
    - 3) Disabled and overridden objects, points and SNVTs.
    - 4) Objects in manual or automatic alarm lockout.
    - 5) Objects in alarm lockout currently in alarm.
    - 6) Logs:
      - (a) Alarm History.
      - (b) System messages.
      - (c) System events.
      - (d) Trends.
  - b. Custom:
    - 1) Daily.
    - 2) Weekly.
    - 3) Monthly.
    - 4) Annual.
    - 5) Time and date stamped.
    - 6) Title.
    - 7) Facility name.
  - c. Tenant Override:
    - 1) Monthly report showing total, requested, after-hours HVAC and lighting services on a daily basis for each tenant.
    - 2) Annual report showing override usage on a monthly basis.
- C. Workstation Applications Editors:
  - 1. Provide editing software for each system application at PC workstation.
  - 2. Downloaded application is executed at controller panel.
  - 3. Full screen editor for each application allows operator to view and change:
    - a. Configuration.
    - b. Name.
    - c. Control parameters.
    - d. Set-points.
  - 4. Scheduling:
    - a. Monthly calendar indicates schedules, holidays, and exceptions.
    - b. Allows several related objects to be scheduled and copied to other objects or dates.
    - c. Start and stop times adjustable from master schedule.
  - 5. Custom Application Programming:
    - a. Create, modify, debug, edit, compile, and download custom application programming during operation and without disruption of all other system applications.
    - b. Programming Features:
      - 1) English oriented language, based on BASIC, FORTRAN, C, or PASCAL syntax allowing for free form programming.
      - 2) Alternative language graphically based using appropriate function blocks suitable for all required functions and amenable to customizing or compounding.
      - 3) Insert, add, modify, and delete custom programming code that incorporates word processing features such as cut/paste and find/replace.



- 4) Allows the development of independently, executing, program modules designed to enable and disable other modules.
- 5) Debugging/simulation capability that displays intermediate values and/or results including syntax/execution error messages.
- 6) Support for conditional statements (IF/THEN/ELSE/ELSE-F) using compound Boolean (AND, OR, and NOT) and/or relations (EQUAL, LESS THAN, GREATER THAN, NOT EQUAL) comparisons.
- 7) Support for floating-point arithmetic utilizing plus, minus, divide, times, square root operators; including absolute value; minimum/maximum value from a list of values for mathematical functions.
- 8) Language consisting of resettable, predefined, variables representing time of day, day of the week, month of the year, date; and elapsed time in seconds, minutes, hours, and days where the variable values can be used in IF/THEN comparisons, calculations, programming statement logic, etc.
- 9) Language having predefined variables representing status and results of the system software enables, disables, and changes the set points of the controller software.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify existing conditions before starting work.
- B. Verify that conditioned power supply is available to the control units and to the operator work station. Verify that field end devices, wiring, and pneumatic tubing is installed prior to installation proceeding.

#### **3.02 INSTALLATION**

- A. Install control units and other hardware in position on permanent walls where not subject to excessive vibration.
- B. Install software in control units and in operator work station. Implement all features of programs to specified requirements and appropriate to sequence of operation. Refer to Section 23 09 93.
- C. Provide conduit and electrical wiring in accordance with Section 26 05 83. Electrical material and installation shall be in accordance with appropriate requirements of Division 26.
- D. The temperature controls contractor is responsible for all electrical power and circuits required to complete their work.

#### **END OF SECTION**

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**SECTION 23 21 13  
HYDRONIC PIPING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Hydronic system requirements.
- B. Heating water piping, above grade.
- C. Heating water and glycol piping, above grade.
- D. Chilled water piping, above grade.
- E. Pipe hangers and supports.
- F. Unions, flanges, mechanical couplings, and dielectric connections.

**1.02 REFERENCE STANDARDS**

- A. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; 2021.
- B. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2021.
- C. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2021.
- D. ASME B16.51 - Copper and Copper Alloy Press-Connect Pressure Fittings; 2021.
- E. ASME B31.9 - Building Services Piping; 2020.
- F. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2022.
- G. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2023a.
- H. ASTM B32 - Standard Specification for Solder Metal; 2020.
- I. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2022.
- J. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2020.
- K. ASTM F1476 - Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications; 2007 (Reapproved 2019).
- L. ASTM F3226/F3226M - Standard Specification for Metallic Press-Connect Fittings for Piping and Tubing Systems; 2019 (Reaffirmed 2024).
- M. AWS A5.8M/A5.8 - Specification for Filler Metals for Brazing and Braze Welding; 2019.
- N. AWS D10.12M/D10.12 - Guide for Welding Mild Steel Pipe; 2000.
- O. AWWA C606 - Grooved and Shouldered Joints; 2022.
- P. IAPMO (UMC) - 2024 Uniform Mechanical Code; 2024.
- Q. IAPMO/ANSI/CAN Z1117 - Standard for Press Connections; 2022.
- R. ICC (IMC) - International Mechanical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- S. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2018, with Amendment (2019).

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data:
  - 1. Include data on pipe materials, pipe fittings, valves, and accessories.
- C. Project Record Documents: Record actual locations of valves.

#### **1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with minimum three years of documented experience.
- B. Provide all grooved joint couplings, fittings, valves, specialties, and grooving tools from a single manufacturer.

### **PART 2 PRODUCTS**

#### **2.01 HYDRONIC SYSTEM REQUIREMENTS**

- A. Comply with ASME B31.9 and applicable federal, state, and local regulations.
- B. Piping: Provide piping, fittings, hangers, and supports as required, as indicated, and as follows:
  - 1. Where more than one piping system material is specified, provide joining fittings that are compatible with piping materials and ensure that the integrity of the system is not jeopardized.
  - 2. Use non-conducting dielectric connections whenever joining dissimilar metals.
  - 3. Grooved mechanical joints may be used in accessible locations only.
    - a. Accessible locations include those exposed on interior of building, in pipe chases, and in mechanical rooms, aboveground outdoors, and as approved by Architect.
    - b. Use rigid joints unless otherwise indicated.
  - 4. Provide pipe hangers and supports in accordance with ASME B31.9 or MSS SP-58 unless indicated otherwise.
- C. Pipe-to-Valve and Pipe-to-Equipment Connections: Use flanges, unions, or grooved couplings to allow disconnection of components for servicing; do not use direct welded, soldered, or threaded connections.
- D. Valves: Provide valves where indicated:
  - 1. Provide drain valves where indicated, and if not indicated, provide at least at main shut-off, low points of piping, bases of vertical risers, and at equipment. Use 3/4 inch (20 mm) gate valves with cap; pipe to nearest floor drain.
  - 2. Isolate equipment using butterfly valves with lug end flanges or grooved mechanical couplings.
  - 3. For throttling, bypass, or manual flow control services, use globe, ball, or butterfly valves.
  - 4. For shut-off and to isolate parts of systems or vertical risers, use ball or butterfly valves.

#### **2.02 HEATING WATER AND GLYCOL PIPING, ABOVE GRADE**

- A. Steel Pipe: ASTM A53/A53M, Schedule 40, black, using one of the following joint types:
  - 1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D10.12M/D10.12 welded.
  - 2. Threaded Joints: ASME B16.3, malleable iron fittings.
  - 3. Grooved Joints: AWWA C606 grooved pipe, fittings of same material, and mechanical couplings.
  - 4. Mechanical Press Sealed Fittings: ASTM F3226/F3226M, ICC (IMC), and IAPMO (UMC) approved, with EPDM seals.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), drawn, using one of the following joint types:
  - 1. Solder Joints: ASME B16.18 cast brass/bronze or ASME B16.22 solder wrought copper fittings.
    - a. Solder: ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.
    - b. Braze: AWS A5.8M/A5.8 BCuP copper/silver alloy.
  - 2. Grooved Joints: AWWA C606 grooved tube, fittings of same material, and copper-tube-dimension mechanical couplings.
  - 3. Mechanical Press Sealed Fittings: ASME B16.51 or IAPMO/ANSI/CAN Z1117, ICC (IMC), and IAPMO (UMC) approved, with EPDM seals.

### **2.03 CHILLED WATER PIPING, ABOVE GRADE**

- A. Steel Pipe: ASTM A53/A53M, Schedule 40, black; using one of the following joint types:
  - 1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D10.12M/D10.12 welded.
  - 2. Threaded Joints: ASME B16.3, malleable iron fittings.
  - 3. Grooved Joints: AWWA C606 grooved pipe, fittings of same material, and mechanical couplings.
  - 4. Mechanical Press Sealed Fittings: ASTM F3226/F3226M, ICC (IMC), and IAPMO (UMC) approved, with EPDM seals.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), hard drawn; using one of the following joint types:
  - 1. Solder Joints: ASME B16.18 cast brass/bronze or ASME B16.22, solder wrought copper fittings.
    - a. Solder: ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.
    - b. Braze: AWS A5.8M/A5.8 BCuP copper/silver alloy.
  - 2. Grooved Joints: AWWA C606 grooved tube, fittings of same material, and copper-tube-dimension mechanical couplings.

### **2.04 PIPE HANGERS AND SUPPORTS**

- A. Provide hangers and supports that comply with MSS SP-58.
  - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
- B. In grooved installations, use rigid couplings with offsetting angle-pattern bolt pads or with wedge-shaped grooves in header piping to permit support and hanging in accordance with ASME B31.9.

### **2.05 UNIONS, FLANGES, MECHANICAL COUPLINGS, AND DIELECTRIC CONNECTIONS**

- A. Unions for Pipe of 2 Inches (50 mm, DN) and Less:
- B. Flanges for Pipe 2 Inches (50 mm, DN) and Greater:
- C. Mechanical Couplings for Grooved and Shouldered Joints: Two or more curved housing segments with continuous key to engage pipe groove, circular C-profile gasket, and bolts to secure and compress gasket.
  - 1. Dimensions and Testing: In accordance with AWWA C606.
  - 2. Mechanical Couplings: Comply with ASTM F1476.
  - 3. Bolts and Nuts: Hot dipped galvanized or zinc-electroplated steel.
  - 4. When pipe is field grooved, provide coupling manufacturer's grooving tools.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Route piping in orderly manner, parallel to building structure, and maintain gradient.
- C. Install piping to conserve building space and to avoid interference with use of space.
- D. Group piping whenever practical at common elevations.
- E. Slope piping and arrange to drain at low points.

**END OF SECTION**

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**SECTION 23 21 14  
HYDRONIC SPECIALTIES**

**PART 1 GENERAL**

**1.01 REFERENCE STANDARDS**

**1.02 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Manufacturer's Installation Instructions: Indicate hanging and support methods, joining procedures.
- C. Project Record Documents: Record actual locations of flow controls.

**1.03 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

**PART 2 PRODUCTS**

**2.01 AIR VENTS**

- A. Manual Air Vent: Short vertical sections of 2-inch (50 mm, DN) diameter pipe to form air chamber, with 1/8 inch (6 mm, DN) brass needle valve at top of chamber.
- B. Float Air Vent:
  - 1. Brass or semi-steel body, copper, polypropylene, or solid non-metallic float, stainless steel valve and valve seat; suitable for system operating temperature and pressure; with isolating valve.
- C. Maximum Fluid Pressure: 150 psi (1,034 kPa).
- D. Maximum Fluid Temperature: 250 degrees F (121.1 degrees C).

**2.02 STRAINERS**

- A. Size 2 inch (50 mm, DN) and Under:
  - 1. Provide threaded, grooved, or sweat brass or iron body for up to 175 psi (1,200 kPa) working pressure, Y-pattern strainer with 1/32 inch (0.8 mm) stainless steel perforated screen.
  - 2. Body Material by Fluid Service:
    - a. Cast Iron or Brass:
      - 1) Steam: Up to 250 psi at 450 degrees F (1,723.6 kPa at 232.2 degrees C).
      - 2) Liquids: Up to 400 psi at 150 degrees F (2,758 kPa at 65.6 degrees C).
- B. Size 2-1/2 inch (65 mm, DN) to 4 inch (100 mm, DN):
  - 1. Provide flanged or grooved iron body for up to 175 psi (1,200 kPa) working pressure, up to 250 degrees F (121.1 degrees C) working temperature, Y-pattern strainer with 1/16 inch (1.6 mm) or 3/64 inch (1.2 mm) stainless steel perforated screen.
  - 2. Body Material by Fluid Service:

**2.03 PRESSURE-TEMPERATURE TEST PLUGS**

- A. Construction: Brass body designed to receive temperature or pressure probe with removable protective cap, and Neoprene rated for minimum 200 degrees F (93 degrees C).
- B. Application: Use extended length plugs to clear insulated piping.

**2.04 BALANCING VALVES**

- A. Size 2 inch (50 mm, DN) and Smaller:
  - 1. Provide ball or globe style with flow balancing, shut-off capabilities, memory stops, and minimum of two metering ports and female sweat, NPT threaded, press, or soldered connections.
  - 2. Metal construction materials consist of bronze or brass.

3. Non-metal construction materials consist of Teflon or EPDM.

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION**

- A. Install specialties in accordance with manufacturer's instructions.
- B. Provide manual air vents at system high points and as indicated.

**END OF SECTION**



**SECTION 23 31 00  
HVAC DUCTS AND CASINGS**

**PART 1 GENERAL**

**1.01 RELATED REQUIREMENTS**

- A. Section 23 33 19 - Duct Silencers.

**1.02 REFERENCE STANDARDS**

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- B. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.
- C. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems; 2024.
- D. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2020.
- E. UL 181 - Standard for Factory-Made Air Ducts and Air Connectors; Current Edition, Including All Revisions.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data for duct materials.
- C. Shop Drawings: Indicate duct fitting types, gauges, sizes, welds, and configuration.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience, and approved by manufacturer.

**1.05 FIELD CONDITIONS**

- A. Do not install duct sealants when temperatures are less than those recommended by sealant manufacturers.

**PART 2 PRODUCTS**

**2.01 GENERAL REQUIREMENTS**

- A. Provide UL Class 1 ductwork, fittings, hangers, supports, and appurtenances in accordance with NFPA 90A and SMACNA (DCS) guidelines unless stated otherwise.
- B. Provide metal duct unless otherwise indicated. Fibrous glass duct can be substituted at the Contractor's option.
- C. Acoustical Treatment: Provide sound-absorbing liners and sectional silencers for metal-based ducts in compliance with Section 23 33 19.
- D. Duct Shape and Material in accordance with Allowed Static Pressure Range:
  - 1. Round: Plus or minus 2 in-wc (500 Pa) of galvanized steel.
  - 2. Rectangular: Plus or minus 1 in-wc (250 Pa) of galvanized steel.
- E. Duct Sealing and Leakage in accordance with Static Pressure Class:
  - 1. Duct Pressure Class and Material for Common Mechanical Ventilation Applications:
    - a. Supply Air: 1/2 in-wc (125 Pa) pressure class, galvanized steel.
    - b. Outside Air Intake: 1/2 in-wc (125 Pa) pressure class, galvanized steel.
    - c. Return and Relief Air: 1/2 in-wc (125 Pa) pressure class, galvanized steel.
    - d. General Exhaust Air: 1/2 in-wc (125 Pa) pressure class, galvanized steel.
- F. Duct Fabrication Requirements:
  - 1. Duct and Fitting Fabrication and Support: SMACNA (DCS) including specifics for continuously welded round and oval duct fittings.

2. Use reinforced and sealed sheet-metal materials at recommended gauges for indicated operating pressures or pressure class.
3. Construct tees, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where not possible and where rectangular elbows must be used, provide airfoil turning vanes of perforated metal with glass fiber insulation.
4. Provide turning vanes of perforated metal with glass fiber insulation when acoustical lining is indicated.
5. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
6. Provide turning vanes of perforated metal with glass fiber insulation when an acoustical lining is required.
7. Where ducts are connected to exterior wall louvers and duct outlet is smaller than louver frame, provide blank-out panels sealing louver area around duct. Use same material as duct, painted black on exterior side; seal to louver frame and duct.

## **2.02 METAL DUCTS**

### **A. Material Requirements:**

1. Galvanized Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M FS Type B, with G60/Z180 coating.

## **2.03 FLEXIBLE DUCTS**

### **A. Flexible Ducts: UL 181, Class 1, polyethylene film, mechanically fastened and rolled using galvanized steel to form spiral helix.**

1. Insulation: R6 insulation with polyethylene vapor barrier film.
2. Pressure Rating: 10 in-wc (2.50 kPa) positive and 5 in-wc (1.25 kPa) negative.
3. Maximum Velocity: 5500 fpm (27.9 m/sec).
4. Temperature Range: Minus 20 degrees F to 250 degrees F (Minus 28 degrees C to 121 degrees C).

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install, support, and seal ducts in accordance with SMACNA (DCS).
- B. Install products following the manufacturer's instructions.
- C. Comply with safety standards NFPA 90A and NFPA 90B.
- D. During construction, provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering the ductwork system.
- E. Duct sizes indicated are precise inside dimensions. For lined ducts, maintain sizes inside lining.
- F. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.

### **3.02 CLEANING**

- A. Clean duct system by forcing air at high velocity through duct to remove accumulated dust. Clean half the system at a time to obtain sufficient air. Protect equipment that could be harmed by excessive dirt with temporary filters or bypass during cleaning.

### **END OF SECTION**

**SECTION 23 73 13**  
**MODULAR INDOOR CENTRAL-STATION AIR-HANDLING UNITS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Casing construction.
- B. Fan section.
- C. Coil section.
- D. Filter and air cleaner section.
- E. Damper section.

**1.02 REFERENCE STANDARDS**

- A. ABMA STD 9 - Load Ratings and Fatigue Life for Ball Bearings; 2015 (Reaffirmed 2020).
- B. AHRI 410 - Forced-Circulation Air-Cooling and Air-Heating Coils; 2001, with Addenda (2011).
- C. AMCA (DIR) - (Directory of) Products Licensed Under AMCA International Certified Ratings Program; 2015.
- D. AMCA 99 - Standards Handbook; 2016.
- E. AMCA 210 - Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating; 2016, with Errata (2018).
- F. AMCA 300 - Reverberation Room Methods of Sound Testing of Fans; 2024.
- G. AMCA 301 - Methods for Calculating Fan Sound Ratings from Laboratory Test Data; 2022.
- H. AMCA 500-D - Laboratory Methods of Testing Dampers for Rating; 2018.
- I. ASHRAE Std 52.2 - Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size; 2017, with Addendum (2022).
- J. ASHRAE Std 62.1 - Ventilation for Acceptable Indoor Air Quality; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- K. ASHRAE Std 90.1 I-P - Energy Standard for Buildings Except Low-Rise Residential Buildings; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- L. ASTM B177/B177M - Standard Guide for Engineering Chromium Electroplating; 2011 (Reapproved 2021).
- M. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.
- N. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2020.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data:
  - 1. Published Literature: Indicate dimensions, weights, capacities, ratings, gauges and finishes of materials, and electrical characteristics and connection requirements.
  - 2. Filters: Data for filter media, filter performance data, filter assembly, and filter frames.
  - 3. Sound Power Level Data: Fan outlet and casing radiation at rated capacity.
- C. Shop Drawings: Indicate assembly, unit dimensions, weight loading, required clearances, construction details, field connection details, and electrical characteristics and connection requirements.
- D. Executed Warranty: Submit documentation of final executed warranty completed in Owner's name and registered with manufacturer.
- E. Manufacturer's Instructions: Include installation instructions.

- F. Maintenance Data: Include instructions for lubrication, filter replacement, motor and drive replacement, spare parts lists, and wiring diagrams.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements for additional provisions.
  - 2. Extra Filters: Two sets for each unit.

#### **1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Accept products on site in factory-fabricated protective containers, with factory-installed shipping skids and lifting lugs. Inspect for damage.
- B. Store in clean dry place and protect from weather and construction traffic. Handle carefully to avoid damage to components, enclosures, and finish.
- C. Do not operate units until ductwork is clean, filters are in place, bearings lubricated, and fan has been test run under observation.

#### **1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Provide minimum two year manufacturer warranty covering repair or replacement due to defective materials or workmanship.

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Trane Technologies, PLC: [www.trane.com/#sle](http://www.trane.com/#sle).
- B. Substitutions: See Section 01 60 00 - Product Requirements.

#### **2.02 CASING CONSTRUCTION**

- A. Full Perimeter Base Rail:
  - 1. Construct of galvanized steel.
  - 2. Provide base rail of sufficient height to raise unit for external trapping of condensate drain pans.
- B. Casing:
  - 1. Construct of one piece, insulated, double wall panels.
  - 2. Provide mid-span, no through metal, internal thermal break.
  - 3. Construct outer panels of galvanized steel and inner panels of galvanized steel.
  - 4. Casing Air Pressure Performance Requirements:
    - a. Able to withstand up to 8 in-wc (2 kPa) positive or negative static pressure.
    - b. Not to exceed 0.0042 inches per inch (0.000165 mm per mm) deflection at 1.5 times design static pressure up to a maximum of plus 8 in-wc (2 kPa) in positive pressure sections and minus 8 in-wc (2 kPa) in negative pressure sections.
- C. Access Doors:
  - 1. Construction, thermal and air pressure performance same as casing.
  - 2. Provide surface mounted handles on hinged, swing doors.
- D. Unit Flooring: Construct with sufficient strength to support expected people and equipment loads associated with maintenance activities.
- E. Casing Leakage: Seal joints and provide airtight access doors so that air leakage does not exceed one percent of design flow at the specified casing pressure.
- F. Insulation:
  - 1. Provide minimum thermal thickness of 12 R (2.29 RSI) throughout.

2. Completely fill panel cavities in each direction to prevent voids and settling.
  3. Comply with NFPA 90A.
- G. Drain Pan Construction:
1. Provide cooling coil and humidifier sections with an insulated, double wall, galvanized steel drain pan complying with ASHRAE Std 62.1 for indoor air quality and sufficiently sized to collect all condensate.
  2. Slope in two planes to promote positive drainage and eliminate stagnate water conditions.
  3. Locate outlet of sufficient diameter at lowest point of pan to prevent overflow at normal operating conditions.
  4. Provide threaded drain connections constructed of drain pan material, extended sufficient distance beyond the base to accommodate field installed, condensate drain trapping.
- H. Finish:
1. Indoor Units:
    - a. Provide exterior, galvanized steel panels with painted surface complying with ASTM B177/B177M.
    - b. Color: Manufacturer's standard color.

### 2.03 FAN SECTION

- A. Type: Forward curved, single width, single inlet, centrifugal plug fan, in accordance with AMCA 99. See Section 23 34 13
- B. Performance Ratings: Determined in accordance with AMCA 210 and labeled with AMCA Certified Rating Seal.
- C. Sound Ratings: AMCA 301; tested to AMCA 300 and label with AMCA Certified Sound Rating Seal.
- D. Bearings: Self-aligning, grease lubricated, with lubrication fittings extended to exterior of casing with plastic tube and grease fitting rigidly attached to casing.
- E. External Motor Junction Box: Factory mount NEMA 4 external junction box and connect to extended motor leads from internally mounted motors.
- F. Motor Wiring Conduit: Factory wire fan motor wiring to the unit mounted variable frequency drive.
- G. Fan Accessories:
- H. Flexible Duct Connections:
  1. For separating fan, coil, and adjacent sections.
- I. Drives:
  1. Comply with AMCA 99.
  2. Bearings: Heavy duty pillow block type, ball bearings, with ABMA STD 9 L-10 life at 50,000 hours.
  3. Shafts: Solid, hot rolled steel, ground and polished, with key-way, and protectively coated with lubricating oil.
  4. V-Belt Drive: Cast iron or steel sheaves, dynamically balanced, bored to fit shafts, and keyed. Variable and adjustable pitch sheaves for motors 15 hp (11.2 kW) and under selected so required rpm is obtained with sheaves set at mid-position; fixed sheave for 20 hp (15 kW) and over, matched belts, and drive rated as recommended by manufacturer or minimum 1.5 times nameplate rating of the motor.
  5. Belt Guard: Fabricate to SMACNA (DCS); 0.106 inch (2.6 mm) thick, 3/4 inch (20 mm) diamond mesh wire screen welded to steel angle frame or equivalent, prime coated. Secure to fan or fan supports without short circuiting vibration isolation, with provision for adjustment of belt tension, lubrication, and use of tachometer with guard in place.

## 2.04 COIL SECTION

- A. Casing: Provide access to both sides of coils. Enclose coils with headers and return bends exposed outside casing. Slide coils into casing through removable end panel with blank off sheets and sealing collars at connection penetrations.
- B. Drain Pans: 24 inch (600 mm) downstream of coil and down spouts for cooling coil banks more than one coil high.
- C. Eliminators: Three break of galvanized steel, mounted over drain pan.
- D. Air Coils:
  - 1. Certify capacities, pressure drops, and selection procedures in accordance with AHRI 410.
- E. Fabrication:
  - 1. Tubes: 5/8 inch (16 mm) OD seamless copper expanded into fins, brazed joints.
  - 2. Fins: Aluminum.
  - 3. Casing: Die formed channel frame of galvanized steel.
- F. Water Heating Coils:
  - 1. Headers: Cast iron, seamless copper tube, or prime coated steel pipe with brazed joints.
  - 2. Configuration: Drainable, with threaded plugs for drain and vent; serpentine type with return bends on smaller sizes and return headers on larger sizes.
- G. Water Cooling Coils:
  - 1. Headers: Cast iron, seamless copper tube, or prime coated steel pipe with brazed joints.
  - 2. Configuration: Drainable, with threaded plugs for drain and vent; threaded plugs in return bends and in headers opposite each tube.

## 2.05 FILTER AND AIR CLEANER SECTION

- A. General: Provide filter sections with filter racks, minimum of one access door for filter removal, and filter block-offs to prevent air bypass.
- B. Throwaway Filters:
  - 1. Media: 2 inch (50 mm) fiberglass with rigid supporting mesh across the leaving face, capable of operating up to a maximum of 500 fpm (2.54 m/s) without loss of efficiency and holding capacity.
  - 2. Frame: Rigid.
  - 3. Minimum Efficiency Reporting Value: 13 MERV, when tested in accordance with ASHRAE Std 52.2.
- C. Differential Pressure Gauge:
  - 1. Provide factory installed dial type differential pressure gauge, flush mounted with casing outer wall, and fully piped to both sides of each filter to indicate status.
  - 2. Maintain plus/minus 5 percent accuracy within operating limits of 20 degrees F (minus 6.7 degrees C) to 120 degrees F (48.9 degrees C).

## 2.06 DAMPER SECTION

- A. Mixing Section: Provide a functional section to support the damper assembly for modulating the volume of outdoor, return, and exhaust air.
- B. Damper Blades:
  - 1. Double-skin airfoil design with metal, compressible jamb seals and extruded-vinyl blade-edge seals on each blade.
  - 2. Self-lubricating stainless steel or synthetic sleeve bearings.
  - 3. Comply with ASHRAE Std 90.1 I-P for rated maximum leakage rate.
  - 4. Provide leakage testing and pressure ratings in compliance with AMCA 500-D test methods.
  - 5. Arrange in parallel or opposed-blade configuration.

- C. Barometric Relief Dampers:
  - 1. Frame: Roll formed galvanized steel.
  - 2. Blades: Roll formed galvanized steel.
  - 3. Blade Seals: Extruded vinyl, mechanically attached to the blade edge.
  - 4. Material:

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Bolt sections together with gaskets.
- C. Install flexible duct connections between fan inlet and discharge ductwork and air handling unit sections. Ensure that metal bands of connectors are parallel with minimum 1 inch (25 mm) flex between ductwork and fan while running.
- D. Provide fixed sheaves required for final air balance.
- E. Make connections to coils with unions or flanges.
- F. Hydronic Coils:
  - 1. Hydronic Coils: Connect water supply to leaving air side of coil (counterflow arrangement).
  - 2. Provide shut-off valve on supply line and lockshield balancing valve with memory stop on return line.
  - 3. Locate water supply at bottom of supply header and return water connection at top.
  - 4. Provide manual air vents at high points complete with stop valve.
  - 5. Ensure water coils are drainable and provide drain connection at low points.
- G. Cooling Coils:
  - 1. Pipe drain and overflow to nearest floor drain.

#### **3.02 SYSTEM STARTUP**

- A. Provide manufacturer's field representative to perform systems startup.
- B. Prepare and start equipment and systems in accordance with manufacturers' instructions and recommendations.
- C. Adjust for proper operation within manufacturer's published tolerances.

#### **3.03 CLOSEOUT ACTIVITIES**

- A. See Section 01 78 00 - Closeout Submittals for closeout submittals.
- B. See Section 01 79 00 - Demonstration and Training for additional requirements.
- C. Demonstrate proper operation of equipment to Owner's designated representative.
- D. Demonstration: Demonstrate operation of system to Owner's personnel.
  - 1. Use operation and maintenance data as reference during demonstration.
  - 2. Briefly describe function, operation, and maintenance of each component.
- E. Training: Train Owner's personnel on operation and maintenance of system.
  - 1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
  - 2. Provide minimum of two hours of training.

**END OF SECTION**

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**SECTION 26 05 05**  
**SELECTIVE DEMOLITION FOR ELECTRICAL**

**PART 3 EXECUTION**

**1.01 EXAMINATION**

- A. Verify that abandoned wiring and equipment serve only abandoned facilities.
- B. Beginning of demolition means installer accepts existing conditions.

**1.02 PREPARATION**

- A. Disconnect electrical systems in walls, floors, and ceilings to be removed.
- B. Coordinate utility service outages with utility company.
- C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.
- D. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Minimize outage duration.

**1.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK**

- A. Remove, relocate, and extend existing installations to accommodate new construction.
- B. Remove abandoned wiring to source of supply.
- C. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- D. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.
- E. Repair adjacent construction and finishes damaged during demolition and extension work.
- F. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.

**END OF SECTION**

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**SECTION 26 05 83  
WIRING CONNECTIONS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Electrical connections to equipment.

**1.02 RELATED REQUIREMENTS**

- A. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables.
- B. Section 26 05 33.13 - Conduit for Electrical Systems.
- C. Section 26 05 33.16 - Boxes for Electrical Systems.
- D. Section 26 27 26 - Wiring Devices.
- E. Section 26 28 16.16 - Enclosed Switches.
- F. Section 26 29 13 - Enclosed Controllers.

**1.03 REFERENCE STANDARDS**

- A. NEMA WD 1 - General Color Requirements for Wiring Devices; 1999 (Reaffirmed 2020).
- B. NEMA WD 6 - Wiring Devices - Dimensional Specifications; 2021.
- C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Obtain and review shop drawings, product data, manufacturer's wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.
  - 2. Determine connection locations and requirements.
- B. Sequencing:
  - 1. Install rough-in of electrical connections before installation of equipment is required.
  - 2. Make electrical connections before required start-up of equipment.

**1.05 QUALITY ASSURANCE**

- A. Comply with requirements of NFPA 70.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Cords and Caps: NEMA WD 6; match receptacle configuration at outlet provided for equipment.
  - 1. Colors: Comply with NEMA WD 1.
  - 2. Cord Construction: NFPA 70, Type SO, multiconductor flexible cord with identified equipment grounding conductor, suitable for use in damp locations.
  - 3. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection.
- B. Disconnect Switches: As specified in Section 26 28 16.16 and in individual equipment sections.
- C. Wiring Devices: As specified in Section 26 27 26.
- D. Flexible Conduit: As specified in Section 26 05 33.13.
- E. Wire and Cable: As specified in Section 26 05 19.
- F. Boxes: As specified in Section 26 05 33.16.

## **2.02 EQUIPMENT CONNECTIONS**

### **PART 3 EXECUTION**

#### **3.01 ELECTRICAL CONNECTIONS**

- A. Make electrical connections in accordance with equipment manufacturer's instructions.
- B. Make conduit connections to equipment using flexible conduit. Use liquidtight flexible conduit with watertight connectors in damp or wet locations.
- C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.
- D. Provide receptacle outlet to accommodate connection with attachment plug.
- E. Provide cord and cap where field-supplied attachment plug is required.
- F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.
- G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.
- H. Install terminal block jumpers to complete equipment wiring requirements.
- I. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

**END OF SECTION**

## **SECTION 26 28 13 FUSES**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Fuses.

#### **1.02 RELATED REQUIREMENTS**

- A. Section 26 28 16.16 - Enclosed Switches: Fusible switches.
- B. Section 26 29 13 - Enclosed Controllers: Fusible switches.

#### **1.03 REFERENCE STANDARDS**

- A. NEMA FU 1 - Low Voltage Cartridge Fuses; 2012.
- B. UL 248-1 - Low-Voltage Fuses - Part 1: General Requirements; Current Edition, Including All Revisions.

#### **1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Coordinate fuse clips furnished in equipment provided under other sections for compatibility with indicated fuses.
    - a. Fusible Enclosed Switches: See Section 26 28 16.16.
    - b. Fusible Switches for Enclosed Motor Controllers: See Section 26 29 13.
  - 2. Coordinate fuse requirements according to manufacturer's recommendations and nameplate data for actual equipment to be installed.
  - 3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Bussmann, a division of Eaton Corporation: [www.cooperindustries.com/#sle](http://www.cooperindustries.com/#sle).
- B. Littelfuse, Inc: [www.littelfuse.com/#sle](http://www.littelfuse.com/#sle).
- C. Mersen: [ep-us.mersen.com/#sle](http://ep-us.mersen.com/#sle).

#### **2.02 FUSES**

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- B. Unless specifically indicated to be excluded, provide fuses for all fusible equipment as required for a complete operating system.
- C. Provide fuses of the same type, rating, and manufacturer within the same switch.
- D. Comply with UL 248-1.
- E. Unless otherwise indicated, provide cartridge type fuses complying with NEMA FU 1, Class and ratings as indicated.
- F. Voltage Rating: Suitable for circuit voltage.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that fuse ratings are consistent with circuit voltage and manufacturer's recommendations and nameplate data for equipment.
- B. Verify that conditions are satisfactory for installation prior to starting work.

#### **3.02 INSTALLATION**

- A. Do not install fuses until circuits are ready to be energized.

- B. Install fuses with label oriented such that manufacturer, type, and size are easily read.

**END OF SECTION**

# **APPENDIX**

**GREENVILLE-SPARTANBURG**

**AIRPORT DISTRICT**



**CONSTRUCTION**

**SAFETY AND SECURITY**

**GUIDELINES**

**9.3.2019**



# **GSP CONSTRUCTION SAFETY AND SECURITY**

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## **Section 1 – Terms and Acronyms**

**Air Operations Area (AOA).** The AOA is the area of the airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft; it includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, and aprons. The GSP AOA is bounded by a fence to which access is restricted; specific training and permission is required to obtain access.

**Air Traffic Control Tower (ATCT).** The Greer ATCT is operated by the FAA and is open daily from 0600 to 2345 local hours. When the ATCT is closed, a Common Traffic Advisory Frequency (CTAF) is used to keep the airport open for air traffic.

**Airport Operations Center (AOC).** The AOC operates 24-hours a day; monitoring security and alarm systems, as well as airport telephone and radio communication systems. The AOC dispatches GSP Operations, GSP Fire, and GSP Police. The AOC may be reached at (864) 848-6246.

**Airport Security Coordinator (ASC).** The GSP ASC serves as the airport's primary and immediate contact for security-related activities and communications with Transportation Security Agency (TSA). The primary ASC is the GSP Police Chief at (864) 848-6266. The alternate ASC is the GSP Senior Director of Operations and Public Safety at (864) 848-6220.

**Apron or Ramp.** A defined area within the AOA intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking or maintenance.

**Common Traffic Advisory Frequency (CTAF).** CTAF is used for air-to-air communication at the airport when the ATCT closes overnight, keeping the airport itself open for cargo operations and other activity. At GSP, CTAF is VHF 120.1.

**Construction Safety and Phasing Plan (CSPP).** The overall plan for safety and phasing of a construction project developed by the airport or airport consultant and approved by the Airport District. It is included in the invitation for bids and becomes part of the project specifications. For most projects inside the AOA, the CSPP must be FAA approved prior to contract award.

**FAA Form 7460-1, Notice of Proposed Construction or Alternation.** For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace. (See guidance available on the FAA web site at <https://oeaaa.faa.gov>.)

## **GSP CONSTRUCTION SAFETY AND SECURITY**

**Facilities Department.** The GSP Facilities Department maintains all GSP facilities, equipment, utilities, and grounds (to include roads). Unless prior coordinated, they operate during normal business hours. Any modification to an existing facility or grounds, interruption to utilities, etc., must be approved by the Airport Project Manager, in coordination with the Facilities Department. The Director of Facilities may be reached at (862) 848-6247.

**Fire Department.** The GSP Fire Department provides aircraft rescue and firefighting, structural firefighting and emergency medical services 24-hours a day. Any agency requesting emergency medical or fire services, contact the AOC (number on back of badge) at (864) 848-6246 or dial 911. The GSP Fire Chief may be reached at (864) 848-6265.

**Foreign Object Debris (FOD).** Any object, live or not, located in an inappropriate location in the airport environment that has the capacity to injure airport or airline personnel and damage aircraft.

**Movement Area.** Airport areas used for taxiing, takeoff and landing of aircraft, exclusive of loading ramps and aircraft parking areas. At GSP, the movement area consists of Runway 04/22, Taxiway's A, B, C, D, F, G, J, K, L and portions of link Taxiway's L2, L3, L4, L5, L6, L8 and L9. Access must be approved by ATCT.

**Non-Movement Area.** The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft and includes aprons (ramps) not under control by the ATCT. At GSP, the non-movement area consists of the South Cargo Apron; Air Carrier Apron; Itinerant Apron; Maintenance, Repair and Overhaul (MRO) Apron; General Aviation (GA) apron; Center Cargo Apron; North Cargo Apron; and various access roads.

**Non-Movement Area Boundary Marking.** The non-movement area boundary marking is used to delineate the movement area under direct ATCT control from the non-movement areas which are not under ATCT control. No aircraft or vehicle may cross this marking without ATCT permission. At GSP, the marking is located on link Taxiways L2, L3, L4, L5, L6, L8 and L9.



**Notice-to-Airman (NOTAM).** A notice providing general information essential for the safe and efficient operation of aircraft; as the establishment or condition of or change in any aeronautical facility, service, procedure, or hazard. GSP NOTAMs are issued by GSP Operations or the FAA.

## **GSP CONSTRUCTION SAFETY AND SECURITY**

**Navigation Aid (NAVAID) Critical Area.** An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.

**Obstruction.** Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, subpart C.

**Object Free Area (OFA).** An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

**Operations Department.** The GSP Operations Department oversees landside and airside airport operations during all commercial passenger service aircraft operations; typically, from 0500L to 0100L daily. GSP OPS will conduct airfield safety inspections of all airside construction sites no less than daily. The Operations Duty Manager may be reached at (864) 848-6233 or mobile (864) 414-6422.

**Police Department.** The GSP Police Department provides law enforcement and emergency services 24-hours a day. Any agency requesting emergency medical or fire services, contact the AOC (number on back of badge) at (864) 848-6246 or dial 911. The GSP Police Chief may be reached at (864) 848-6266.

**Runway Safety Area (RSA).** The GSP RSA includes the ground surface 250 feet either side of runway centerline and extends 1,000 feet beyond the runway end. No construction activities may take place in this area when the runway is open.

**Security Identification Display Area (SIDA).** The portion of an airport, specified in the Airport Security Program (ASP), in which security measures specified in Title 49 of the Code of Federal Regulations are carried out. This area includes the secured area and may include other areas of the Airport.

**Safety Plan Compliance Document (SPCD).** Details developed and submitted by the contractor to the Airport District for approval providing details on how the performance of a construction project will comply with the CSPP. The SPCD must be approved by the airport before the notice to proceed is issued.

## Section 2 - General Information

Airports are complex environments, and procedures and conditions associated with construction activities often affect aircraft operations and can jeopardize operational safety. Safety considerations are paramount and may make operational impacts unavoidable. However, careful planning, scheduling, and coordination of construction activities can minimize disruption of normal aircraft operations and avoid situations that compromise the airport's operational safety.

Per FAA AC 150/5370, *Operational Safety on Airports During Construction*, a Construction Safety and Phasing Plan (CSPP) must be developed for each on-airfield construction project:

- Projects funded in whole or part under the Airport Improvement Program (AIP) or the Passenger Facility Charge (PFC) program must be reviewed and approved by the FAA Southern Region Airport's District Office (ADO). The CSPP must be reviewed and approved by the GSP Airport District before being submitted to the ADO.
- Projects funded entirely by the airport must be reviewed and approved by the GSP Airport District.

Per FAA Order 5200.11, projects that require a CSPP do not include construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. However, extraordinary circumstances may trigger the need for a CSPP. The GSP Airport District will determine the need for each project on airport property.

A Safety Plan Compliance Document (SPCD) details how the contractor will comply with the CSPP. Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, contractor's points of contact, construction equipment heights) during the development of the CSPP. The successful contractor must define such details by preparing an SPCD that the GSP Airport District reviews for approval prior to issuance of a notice-to-proceed. The SPCD is a submittal of the CSPP, similar to how a shop drawing review is a submittal to the technical specifications.

Any firm proposing construction or alteration of objects that affect navigable airspace, as defined in FAR Part 77, must notify the FAA by submitting a FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, to the Atlanta Airport District Office. This includes construction equipment and proposed parking or staging areas for equipment

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(i.e., cranes, graders, other equipment) on airports. Further guidance is available on the FAA web site at [oeaaa.faa.gov](http://oeaaa.faa.gov).

Operations at GSP are governed by the airport Rules and Regulations and various other contingency and operational plans. The policies and procedures apply to all persons, vehicles and equipment operating at the Greenville-Spartanburg International Airport and its associated properties. Unless otherwise provided in contract or other agreement, no person shall use any open area of the airport without permission. If a person uses such area without first obtaining permission, the District may order the activity to cease.

All personnel who access the AOA are responsible for knowing and adhering to the Rules and Regulations; a current copy may be downloaded from the GSP website at <https://www.gspairport.com/>. Deviations from GSP standard operating procedures shall only be allowed with permission from the Airport District. Violations and penalties shall be assessed in accordance with the GSP Rules and Regulations.

All agencies conducting operations inside the AOA must maintain current liability insurance.

Any questions or concerns regarding AOA operations should be immediately referred to the Operations Duty Manager (864-414-6422), the Airport Operations Center (AOC) 864-848-6246, or the Director of Operations (864-848-6220). Questions or concerns regarding other airport property should be immediately referred to the Airport Project Manager.

### **Section 3 - Establish a Safety Culture**

Aviation safety is the primary consideration at the airport, especially during construction. The project CSPP and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard. They must provide information necessary for the Airport Operations department to conduct airfield inspections and expeditiously identify and correct unsafe conditions during construction. All aviation safety provisions included within the project drawings, contract specifications, and other related documents must also be reflected in the CSPP and SPCD.

GSP has a zero-tolerance safety philosophy; that is, all incidents are avoidable. The goal of each contractor should be zero recordables and zero lost work day cases. GSP is relying on each contractor to follow OSHA guidelines at all times. Additionally, GSP expects the contractor to have a robust SPCD plan which facilitates these goals.

Everyone has a role in operational safety on airports during construction; the Airport District, the airport's consultants, the construction contractor and subcontractors, airport users, airport tenants, Fire, Police and Operations Department personnel, FAA Air Traffic Control and Technical Operations personnel, FAA Airports Division personnel, Department of Design & Construction, and others. Close communication and coordination between all affected parties is the key to maintaining safe operations. Such communication and coordination should start at the project scoping meeting and continue through the completion of the project.

The Airport District and contractor shall conduct onsite safety inspections throughout the project to ensure construction contractors and tenants comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards. The contractor shall immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

The contractor is responsible for complying with the CSPP and SPCD; the contractor must:

- Submit a Safety Plan Compliance Document (SPCD) to the Airport District describing how it will comply with the requirements of the CSPP and supply any details that could not be determined before contract award. The SPCD must include a certification statement by the contractor, indicating an understanding of the operational safety requirements of the CSPP and the assertion of compliance with the approved CSPP and SPCD unless written approval is granted by the Airport District. Any construction practice proposed by the contractor that

## **GSP CONSTRUCTION SAFETY AND SECURITY**

does not conform to the CSPP and SPCD may impact the airport's operational safety and will require a revision to the CSPP and SPCD and re-coordination with the airport operator and the FAA in advance.

- The SPCD must include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I, (Name of Contractor), have read the (Title of Project) CSPP, approved on (Date), and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP.
- Have available at all times copies of the CSPP and SPCD for reference by the Airport District and its representatives, and by subcontractors and contractor employees.
- Ensure that construction personnel are familiar with safety procedures and regulations on the airport. Provide a point of contact who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport. Most projects will require 24-hour coverage.
- Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.
- Conduct sufficient inspections to ensure construction personnel comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.
- Restrict movement of construction vehicles and personnel to permitted construction areas by flagging, barricading, erecting temporary fencing, or providing escorts, as appropriate, and as specified in the CSPP and SPCD.
- Ensure that no contractor employees, employees of subcontractors or suppliers, or other persons enter any part of the air operations area (AOA) from the construction site unless authorized.



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- Ensure prompt submittal through the Airport District of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, and other equipment), stock piles, and haul routes when different from cases previously filed by the airport operator. The FAA encourages online submittal of forms for expediency at <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>.
- Ensure that all necessary safety mitigations are understood by all parties involved, and any special requirements of each construction phase will be fulfilled per the approved timeframe.
- Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.
- There will be no smoking inside the AOA; there is no smoking in areas outside the AOA except in designated areas.
- Comply with all electrical safety requirements per NFPA 70E and any applicable OSHA Standards. All sources of energy (electrical, mechanical, hydraulic, pneumatic, kinetic) be brought to a "zero energy state" before work is done on equipment. All contractors are to follow Lockout/Tag out Standards and prior coordinate with the Airport Project Manager and/or Facilities Department before interrupting any existing power.
- All work in or adjacent to public spaces must have barricades separating the public from the work. Warning signs shall be posted so as to inform the public of hazards and flagmen must be provided if necessary. All public areas are to be kept clean/clear of debris at all times.
- Comply with all federal, state and local safety codes and regulations.

## **Section 4 – Foreign Object Debris (FOD)**

The presence of FOD on the AOA poses a significant threat to the safety of air travel. FOD has the potential to damage aircraft during critical phases of flight, which can lead to catastrophic loss of life and airframe, and at the very least increased maintenance and operating costs for aircraft operators.

The objective of the FOD prevention program is to: (1) prevent debris through awareness training; (2) detect FOD through self-inspections; (3) remove FOD both manually and with equipment; and (4) evaluate the program by collecting data to look for ways to make improvements.

The first step in a successful FOD program is making sure contractor personnel working within the AOA are aware of the program's existence. Improvements in FOD safety will occur most efficiently if contractors are actively encouraged to identify potential FOD hazards, act to remove observed FOD, and propose solutions to mitigate future hazards.

- All contractors working within the AOA must be trained to ensure they understand their responsibilities to not create FOD as well as knowing what to report, to whom and when.
- Contractors must develop a FOD self-inspection program any operational pavement areas adjacent to their construction site.

Contractors must ensure the proper care, use, and stowage of material and components or equipment used within the AOA.

- Each contractor shall be responsible for maintaining general housekeeping in their work area and all debris shall be placed in debris containers daily.
- Since the airport is susceptible to high wind events, all equipment, materials, and debris shall be secured at all times or removed immediately to prevent windblown objects outside of construction boundaries.

Once FOD is detected, it must be immediately removed from the airport environment. The primary method of removing FOD is manually, using a "clean-as-you-go" approach. This means anytime FOD is observed, it should be immediately secured by the individual that discovered it. This includes FOD observed from a vehicle; the vehicle must be stopped, exited, and the FOD secured before continuing travel.

Anytime FOD is identified and the volume is too large to secure manually (by hand), the contractor must immediately notify GSP Operations and then employ sweeping equipment to remove the FOD. Once the FOD is removed, operations may resume.

## **Section 5 – Wildlife Hazard Management**

Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports, such as:

- Trash; food scraps must be collected from construction personnel and removed from the site daily. Any dumpsters on site must only be used for construction debris.
- Standing Water.
- Tall Grass and Seeds; requirements for turf establishment can be at odds with requirements for wildlife control. Grass seed is attractive to birds. Lower quality seed mixtures can contain seeds of plants (such as clover) that attract larger wildlife. Seeding should comply with the guidance in AC 150/5370-10, Standards for Specifying Construction of Airports, Item T-901, Seeding. Contact the local office of the United States Department of Agriculture Soil Conservation Service or the State University Agricultural Extension Service (County Agent or equivalent) for assistance and recommendations. These agencies can also provide liming and fertilizer recommendations. All applications of fertilizer or seed must be prior approved by GSP Facilities Department.
- Poorly Maintained Fencing and Gates.

Disruption of Existing Wildlife Habitat; while this will frequently be unavoidable due to the nature of the project, the contractor should immediately notify the AOC of any observed wildlife activity within or near the AOA.

## **Section 6 – Blasting**

All contractor blasting operations must have an Application for Permit to Blast approved by SC LLR and an airport approved safety plan.

Contractors will provide the Airport Project Manager a safety plan that describes the safety area required around the blast site that must be protected during the shot and what steps the contractor will take to ensure the safety area is clear of non-participating personnel.

- All blasts in or near the AOA will be covered with dirt and mats.
- All blasts should be coordinated at least 24-hours in advance.

All blasts within the AOA must be approved by the OPS Duty Manager (848-414-6422), who will coordinate with the FAA ATCT, just prior to the actual blast.

- Once approved, the contractor will innate pre-blast safety protocols (horns, signals, etc.) and then complete the blast.
- After each blast, OPS will conduct a FOD inspection of effected AOA areas and advise the contractor if any cleanup is required.

## **Section 7 – Cranes**

Contractors must submit an FAA Form 7460 for any construction equipment, such as temporary cranes, whose working limits penetrates an airport imaginary surface. A Final Determination memo from the FAA must be approved before activities begin.

All crane operations must be prior coordinated with GSP Operations, through the Airport Project Manager, at least 72-hours prior; the following information must be provided:

- Latitude and Longitude
- Ground Elevation (Mean Sea Level - MSL)
- Height (Above Ground Level - AGL)
- Operating Days/Hours

GSP Operations will ensure applicable NOTAMs are issued before the equipment is raised.

All cranes must be obstruction marked and lighted in accordance with Advisory Circular 70/7460-1K, Obstruction Marking and Lighting, Chapters 3, 4, 5 and 12 (orange or orange and white flags and red lights).

- If only operating during daylight (sunrise to sunset); equipment must be flagged.
- If operating during the hours of darkness; (one hour prior to sunset till one hour after sunrise) it must also have a red obstruction light.

Cranes should be lowered to the extent possible at night or anytime not in use.

The Operations Duty Manager will notify the FAA ATCT before cranes are raised; in certain situations, the ATCT may request a crane be immediately lowered.

Cranes on the jobsite will be required to have capacity/swing/boom data present at all times. Contractors are required to flag off the area of the boom/counter weight swing radius and provide an anti-two blocking device on the cable.

Cranes shall be visibly inspected prior to each use with a written weekly inspection documented in the operators log per OSHA requirements.

## **Section 8 – Weather Warnings**

The National Weather Service notifies the AOC of the following Airport Weather Warnings (AWW):

- Severe thunderstorm and tornado warnings that will directly affect GSP.
- Cloud to ground lightning within 5 statute miles of GSP.
- Flash flood warnings that directly affect GSP.
- High wind warnings that will directly affect GSP.
- A watch, warning or advisory for any type of winter precipitation.

The AOC distributes weather warning information via an automated notification system called Send Word Now; which sends voice, email and/or text messages.

Contractors who wish to receive weather warning information for GSP during the construction project must provide a list of names with email or mobile phone numbers to the GSP Operations Department.

## Section 9 – Fire Safety

The Occupational Safety and Health Administration (OSHA), the International Fire Code (IFC), and the National Fire Protection Association (NFPA) each have requirements for the development and maintenance of a fire prevention program at construction job sites.

- OSHA 29 CFR Part 1926, *Safety and Health Regulations for Construction*
- IFC, Chapter 33, *Fire Safety During Construction and Demolition*
- NFPA 1, *Fire Code*

Contractors will develop and maintain an effective fire protection and prevention program at the job site throughout all phases of construction, repair, alternation, or demolition work.

The fire safety program will be developed using NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*. NFPA 241 provides a list of items that must be addressed within the fire safety program. Within each of these are further requirements described in full within the chapter.

- Good housekeeping (to include location and storage of equipment, materials, and temporary structures and safe and proper application of construction methods and processes)
- On-site security
- Fire protection systems (installation and demolition)
- Organization and training of an on-site fire brigade
- Development of a pre-fire plan with the local fire department
- Rapid communication
- Considerations for special hazards and conditions
- Protection of existing and surrounding structures and equipment

The contractor must submit the initial project fire safety plan to the airport Fire Chief, as the AHJ (authority having jurisdiction). The fire safety plan must be approved by the Airport District prior to issuance of a notice-to-proceed.

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Once approved and the project begins, any modification or additions to the fire safety plan must be approved by the AHJ.

If required, the AHJ will assist with coordinating pre-fire planning between construction site management and any local mutual aid fire departments.

If the contractor uses a guard service or site security personnel, they should be trained and responsible for:

- Emergency notification of fire department and construction management
- Use of fire protection equipment
- Familiarity with fire hazards
- Operation and control of construction elevators
- Staying informed on status of emergency equipment and hazards
- Regular patrol of construction site/area

For additional information specifically related to the selection, training, and duties of guard service personnel, NFPA 601, *Standard for Security Services in Fire Loss Prevention*, should be referenced.

20 lb. ABC Fire extinguishers shall be placed and maintained on the job site in conspicuous locations. Additional 20 lb. ABC fire extinguishers shall be provided by each subcontractor when they are engaged in fire susceptible activities (i.e., welding and burning, heaters in use, tar kettles and paint storage).

If a fire occurs, dial 911 or notify the AOC at 864-848-6246 (emergency number on the back of airport badges).



## **Section 10 – Hot Work Permit**

The GSP Fire Department supervises the hot work permitting process. A hot work permit is required for any work within 35 feet of a building.

- All gas bottles such as propane, oxygen and acetylene shall be stored and tied in a vertical position in areas designated by the Airport Project Manager. All stored bottles shall be capped. Propane shall not be stored indoors. All gas bottles in use shall be tied in the vertical position and capped at the end of the working day.
- All oxygen and acetylene in use shall be in proper carts with required regulators, flash arrestors and check valves installed.
- During welding or cutting operations, hot work, or fire susceptible operation, a full-time fire watch with at least a 10lb ABC fire extinguisher or other suitable fire extinguishing equipment shall be maintained in a state of readiness for instant use. Such equipment may consist of pails of water, buckets of sand, hose or portable extinguishers depending upon the nature and quantity of the combustible material exposed in accordance with OSHA 1910.252(a)(2)(ii).
- Fire watch must continue for a minimum of thirty (30) minutes after the fire susceptible operation has ceased. Each welding cart must have an attached fire extinguisher. Non-asbestos fire-resistant blankets must be used to contain welding sparks.
- All acetylene and fuel gas cylinders shall be separated from oxygen cylinders during storage by a minimum of 20 feet or by a non-combustible barrier of at least 5 feet high with a fire-resistant rating of at least one-half hour.
- A hot work permit must be submitted and approved by GSP Fire Department in advance for each welding task.

## GSP HOT WORK PERMIT (WELDING – CUTTING)

This form is to be filled out in its entirety by the responsible person actually performing the “HOT WORK”. The Airport Fire Department will inspect work areas and must approve permits **before** hot work begins; contact the GSP Fire Department at (864) 848-6216 to request a permit.

Company:	Responsible Person:
Work to be Performed:	Building and Room Number or Area of Equipment:
Is it possible to perform this work in the shop?	
Flame or spark-producing equipment to be used has been inspected and found in good repair.	
Sprinklers where provided, are in commission and will not be taken out of service while this work is being done.	
There are no combustible fibers, dusts, vapors, gases or liquids in the area. Tanks and equipment previously containing such materials have been purged. The absence of gases or vapors has been verified by a combustible gas detection instrument. If there is a possibility of a leak developing in nearby piping equipment, or tanks, this area is being continuously monitored. Call the GSP Fire Department if assistance is needed to test area.	
Fire Alarms will not be taken out of service while work is being performed. If alarm system must be deactivated during work, the GSP Fire Department will be contacted prior to taking the alarm out of service so that a suitable “fire watch” can be coordinated.	
The work will be confined to the area or equipment specified on this permit.	
Surrounding floors have been swept clean and, if combustible, wet down	
Suitable fire extinguishing equipment shall be available (fire extinguisher, pails of water or buckets of sand).	
All combustibles have been relocated 35 feet from the operation and the remainder protected with metal guards or flame-proofed curtains or covers (not ordinary tarpaulins).	
All floor and wall openings within 35 feet of the operations have been tightly covered.	
Responsible personnel have been assigned to provide a “Fire Watch” for dangerous sparks in the work area, as well as on floors above and below while work is being performed.	
Arrangements have been made to provide a “Fire Watch” to patrol the area, including floors above and below, during any lunch or rest period and for a least one-half hour after the work has been completed.	

Responsible Person: I have taken the above precautions, Signature: \_\_\_\_\_

Hot Work Approved by Supervisor, Signature: \_\_\_\_\_

GSP Fire Department HOT WORK PERMIT Approved by: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ & Time: \_\_\_\_\_

**IN CASE OF EMERGENCY DIAL 9-1-1 OR THE AOC @ 864-848-6264**

## **Section 11 – Confined Spaces**

The purpose of the GSP Confined Space Entry Program is to prevent accidents by training and equipping workers to eliminate or control the hazards associated with entering, working within, and exiting confined spaces.

The GSP Confined Space Entry Program, per OSHA Standard 1910.146, *Permit Required Confined Spaces*, enables workers to recognize potential confined spaces, understand the hazards of confined spaces, and take precautions to protect persons working in and around confined spaces.

All contractors working at GSP must comply with the GSP confined space entry program and obtain an entry permit from the GSP Fire Department.

Contact the Fire Department for a copy of the GSP Confined Space Entry Program, which includes applicable permit forms that must be completed by the contractor and approved by the GSP Fire Department before entering.

## **Section 12 – Spill Clean Up and Waste Disposal**

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks.

Transporting and handling of other hazardous materials on airport property also requires special procedures; see FAA AC 150/5320-15, *Management of Airport Industrial Waste*.

Contractors must maintain spill cleanup materials and sealable containers on site to store used absorbent materials collected until they can arrange proper disposal. Containers must be maintained in good condition and be clearly labeled. Soiled materials will not be thrown into a dumpster with non-hazardous garbage.

If a spill is a small, incidental spill, the contractor will respond with materials available on site to contain and initiate cleanup.

If a spill exceeds 5 gallons or if any spilled material enters a storm drain or occurs on an asphalt surface, the contractor must contact the Airport Project Manager or the AOC. If the AOC is notified, they will dispatch the GSP Fire Department to supervise containment and cleanup efforts.

If the spill is beyond the capacity of site resources to clean up, the contractor will contain and then solicit help from a commercial cleanup contractor.

## **Section 13 – Security**

Only badged personnel are authorized unescorted access to any airport Security Identification Display Area (SIDA); which are areas specified in the TSA approved Airport Security Program (ASP) in which security measures specified in Title 49 of the Code of Federal Regulations (CFR) are carried out.

In accordance with the TSA Security Directive (SD) 1542-04-08, the Greenville-Spartanburg International Airport (GSP) is required to have an "Authorized Signatory" for each general contractor working on the Airport in a SIDA. The Airport will designate/approve the number of Signatories for each company/organization based on operational needs.

The Signatory shall initiate and authorize all badge issues, renewals, and/or terminations for their affiliates following the procedures in the GSP Badging Manual. The Signatory will serve as primary point of contact for all badging matters for the GSP Badging Office and the Airport Security Coordinator (ASC).

Contractors must understand that the entire employee badging process can take up to 3 weeks and requires two appointments with the GSP Badging office. Due to the required lead time required to obtain a badge, contractors must plan work accordingly. Contractors should contact the GSP Badging Office for a current badging fee schedule.

The first appointment includes processing the badge application and fingerprinting for a Criminal History Records Check (CHRC) and TSA Security Threat Assessment (STA).

- The Signatory must request an appointment with the Badging office; walk-ins are not accepted; an appointment must be requested and scheduled.
- Completion of the Security Badge Application (GSP Form ID-01).
  - The Badging office will not accept photo copied applications; the application must be an original.
  - Section 1, 2, 3, and 4 must be completed by the applicant.
  - The Signatory must review Section 1, 2, 3, and 4 for accuracy and completion prior to appointment. If any of the sections are not completed at time of appointment, the application will not be processed and the appointment will be re-scheduled. Any false statements on the badging application may result in criminal and civil prosecution.
  - Section 5 of the application must be completed by the Signatory.

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- The Signatory must only request escort authority for those employees with an absolute need to do so; typically, supervisory level personnel.
- The applicant must provide proper identification (typically two forms) as outlined in the "Lists of Acceptable Documents" attached to the most current "Form I-9, Employment Eligibility Verification" at time of appointment (see [www.uscis.gov/files/form/I-9.pdf](http://www.uscis.gov/files/form/I-9.pdf)). Failure to provide valid identification will require the appointment to be rescheduled.
  - US citizens born abroad MUST provide ONE of the following – a US Passport, a Certificate of Naturalization, or a Certificate of Birth Abroad.
  - Non-US citizens MUST provide – an Alien Registration Number, OR a Foreign Passport AND an I-94/I-94A Arrival/Departure Form.
- Payment is required at time of appointment. Failure to provide payment will require the appointment to be rescheduled.
- The first appointment typically takes 15-30 minutes to process.
- STA and CHRC clearances can take 3-14 business days to receive results.

Upon successful completion of the CHRC and the STA (no disqualifying offenses), the Badging office will contact the Signatory to schedule a second appointment.

- IMPORTANT – the applicant has 30 days from the day the Badging office makes contact with the Signatory to be issued a badge. In failing to do so, the applicant will have to start the badge process over which includes a new application, re-submission of security clearances and charged associated fees.
- A 60-day extension may be provided if an applicant is in the process of resolving STA or CHRC issues.
- Only the applicant may request a copy of their STA or CHRC results; requests must be in writing addressed to the Airport Security Coordinator.
- The applicant must complete the computer based SIDA/Non-Movement Area Driver's training before the badge is issued.
- The second appointment typically takes from 25-45 minutes to process.

## **GSP CONSTRUCTION SAFETY AND SECURITY**

No person shall enter a Security Identification Display Area (SIDA) without proper authorization. Anyone without proper identification shall be considered unauthorized and shall be removed from the SIDA and will be subject to prosecution. All personnel and vehicles that are authorized access to the SIDA shall clearly display a valid Airport Identification Badge and AOA Access Permit or shall be under escort by the Airport District or badged airport tenant.

All personnel in a SIDA must display the badge issued at all times on the outermost layer of clothing. Those persons issued a badge but not in possession of same may not be escorted in the SIDA.

All individuals having airport issued or airport approved ID media are to detect, respond to and report, to the AOC or Police, any unauthorized presence or movement in the AOA or any attempted entry into the AOA by an individual whose access is not authorized.

Each individual with access to any SIDA must present their airport issued ID media to the access control system regardless of the number of persons needing to enter the same area. Individuals accessing a door, gate, or elevator leading to any SIDA area must remain with the door or gate until it is secure. Vehicle gates must close before the next vehicle may badge through.

Airport badges will be safeguarded at all times and will be collected by the contractor and turned over to the Badging Office when no longer needed.

Lost cards must be reported to the Airport Security Coordinator or the airport badging office immediately. An escalating fee will be assessed for a lost badge. Remedial training will also be required after the loss of a second badge. The third loss of badge will result in termination of access privileges.

A badged individual cannot loan their badge to someone else to gain access into any area. This will result in forfeiture of badge and removal from job site.

Any person not badged must be escorted by an authorized individual to access any SIDA. The only personnel authorized to escort are those who have an airport issued badge with an "E" on it, that has access to the particular SIDA area they are entering. Escorts are responsible for the actions of those being escorted.

- Individuals being escorted must be continuously accompanied or monitored by their escort while in the SIDA; typically, escorted individuals should be within 25 feet of their escort and not exceed a 5 to 1 ratio (1 escort may escort up to 5 individuals).

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- It is the responsibility of the escort to immediately notify airport Police if an individual under escort engages in activities other than that for which access was granted. Airport Police will remove violators from the SIDA and may issue a security violation citation.

Individuals working in a sterile area that do not possess an airport badge must submit to screening and be under approved escort while in the sterile area. If they have prohibited items (i.e., tools) that cannot process through screening, they will be inspected by Airport Police or Airport Operations before being escorted into the sterile area.



## **Section 14 – Temporary Fencing and Construction Gates**

Contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel.

Any modification to the existing airport AOA fencing requires prior coordination with the ASC and TSA approval. The approval process can take up to 45-days.

Temporary fencing must be 7-8 feet chain-link with 3 strands of barbwire on top. The bottom must be secured with a guide wire and the fence must be anchored in a manner acceptable to the ASC.

No vehicles, equipment or material may be parked or stockpiled within 10 feet of any airport fencing; permanent or temporary; equipment and material staging must be approved by the Airport Project Manager.

Temporary gates must be equipped so they can be securely closed and locked to prevent access by unauthorized people or animals. The airport will provide an AOA lock and key to the contractor, who must sign for and assume responsibility for the gate from that point forward. The lock and key must be returned when the temporary gate is removed; if a contractor fails to return a lock or key, they will be charged to replace all AOA locks and keys.

Gates must be secured after each opening unless a guard is placed to manage vehicles and personnel entering the AOA. If a gate will be left open and manned, this procedure must be prior coordinated and approved by the ASC. The contractor must establish procedures to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle.

GSP Operations or Police will deliver a "stop list" each day the gate is opened so the guard can verify an individual's badges prior to granting access to the AOA. The gate will not be opened until the stop list is in hand.

## **Section 15 – Temporary Services and Facilities**

It is the responsibility of the Contractor to provide the necessary utilities and facilities to complete their work.

- The contractor shall contact the various utilities to secure taps/meters/fees/services/usage.
- The contractor shall repair any damage to the landscaping returning the area to previous condition and obtain approval from the airport prior to departing the project.

## **Section 16 – Vehicle Operations**

Any change to an existing airport traffic pattern must be prior coordinated with the Airport Project Manager and approved by the GSP Police Department.

Motor vehicles shall not be operated in or upon a public vehicular parking area or public airport roadway unless (1) the driver possess a valid driver's license to operate such vehicle on the highways of this State and (2) such vehicle is registered in accordance with the provisions of the laws of this State.

All traffic in or upon a public airport roadway, a public vehicular parking area, fuel storage area, movement or non-movement area of the Airport must, at all times, comply with any lawful order of law enforcement or signal or direction from any authorized representative of the Airport District. Vehicles shall not be operated in a careless or negligent manner or at a speed or in a manner which endangers or is likely to endanger persons or property.

The Laws of the State of South Carolina are applicable to vehicular and pedestrian traffic on the highways, streets, roads, crosswalks, sidewalks, parking facilities, terminal areas and all other areas of the District. Violations involving traffic, parking, and criminal statutes will be enforced by the Airport Police.

All vehicles driven on the AOA are required to have an airport issued AOA decal affixed to the lower corner of the windshield on the driver's side of the vehicle. Construction equipment that will not leave the AOA daily or vehicles being escorted are not required to have an AOA sticker.

- To obtain an AOA sticker, the company owning the vehicle must maintain liability insurance in the form of primary and excess, or layered amounts of insurance covering the vehicle in an amount of \$5,000,000 for bodily injury and property damage liability for any one occurrence.
- Applications for an AOA sticker are available at the GSP Badging Office or the GSP Police Department.

All construction vehicles operated at GSP must display a company logo in at least 4-inch letters on both sides of the vehicle. Vehicles operating on the AOA must also have an amber flashing light visible from 360 degrees.

All vehicles or equipment operated in the AOA must be serviceable and safe; any vehicle or equipment that is mechanically inoperative, leaking fluids, lights out, etc., must be promptly removed from the AOA until repaired.

## **GSP CONSTRUCTION SAFETY AND SECURITY**

Operators of vehicles in the non-movement area of the AOA must possess a valid U.S. Driver's License and complete and pass the non-movement area training prescribed by the GSP Airport District. An "R" designator on airport issued ID media indicates the individual is authorized to operate a vehicle in the non-movement area.

Construction contractors will not be given unescorted access to the movement area portion of the AOA unless prior coordinated and approved by GSP Operations.

- Operators of vehicles in the movement area of the AOA must possess a valid U.S. Driver's License, complete and pass the non-movement area training and the movement area training prescribed by the Airport District. An "M" designator on airport issued ID media indicates the individual is authorized to operate a vehicle in the both the movement and non-movement areas.
- Vehicles operating in the movement area must have an amber flashing light that is visible from any direction, day and night, including from the air. Vehicles must be equipped with a two-way radio that can maintain continuous contact with the ATCT. When the ATCT is open, no vehicle may enter the movement area unless approved by the ATCT. When the ATCT is closed, CTAF procedures apply.
- The Runway Safety Area (RSA) must be clear of construction vehicles and equipment during aircraft operations.

Vehicles and/or operators not authorized in the non-movement area must be escorted at all times. Those providing the escort must have an "E" on their airport issued ID media and if escorting a vehicle must have either an "R" or "M" on their badge.

Vehicles in the non-movement area will not be operated in excess of 30 miles per hour. Vehicles operating within 50 ft. of an aircraft will not exceed 10 miles per hour. Vehicle operators shall reduce their speed when the pavement is wet, icy or during periods of low visibility.

Vehicles on the AOA will always give way to aircraft; pushing back, being towed, or preparing to taxi or taxiing. Ground vehicles must give way to emergency vehicles responding to an emergency and to fuel trucks at all times.

Vehicles and ground equipment shall not be operated on GSP in a careless or negligent manner; or while the driver is under the influence of an intoxicating liquor, any narcotic, habit-forming drug, or medication with a warning indicating the operation of machinery should not be attempted, or if such vehicle is so constructed, equipped or loaded as to endanger persons or property.

## **Section 17 – Violations**

All persons on Airport property, except those whose presence is specifically authorized and/or mandated by federal or state law, shall be considered as business invitees or guests of the Airport. In the event of a violation of any Standard Operating Procedures, such persons shall be considered trespassers and subject to immediate ejection or removal, at the discretion of an Airport Executive or their designee, from the Airport in any lawful and reasonable manner.

Violations of Airport District Rules and Regulations may result in sanctions up to and including revocation of their airport issued ID media and/or a criminal charge of Violation of Rules and Regulations of the Airport.

Violating AOA procedures may result in a Safety/Security Violations ticket issued by GSP Operations, Police or Fire representatives. Tickets issued by District representatives will be turned into the Senior Director of Operations and Public Safety, who will address the violation with the Airport Project Manager and contractor management.

Violations in the AOA can range from re-training, fines, suspension of driver privileges to revocation of airport issued ID media depending on the severity of the violation. Severity is determined by the VP/COO or their designee.

## **Section 18 – Incident Reporting**

Any incident or accident on airport property that results in injury or property damage must be reported to the Airport Project Manager; if emergency response is required (fire, police or medical), immediately contact the AOC.

If a contractor employee is injured:

- Provisions shall be made by each contractor for immediate and proper first aid or to request emergency medical services.
- Airport Project Manager is to be notified immediately of any incident; a copy of any incident report will be forwarded within 24 hours.
- Contractors are responsible to notify Federal, State and Local authorities in the event of a fatality and/or multiple injuries requiring hospitalization (3 or more) within 8 hours of the time of the incident.

If a member of the public is injured, the Airport Project Manager must be immediately notified. The contractor must send a public liability report to their insurance carrier.

## **Section 19 – Airport Contact Information**

Airport Badging Office (864) 848-6221

Airport Contract Manager (864) 655-5699

Airport Design and Construction (864) 848-6268

Airport Facilities (864) 848-6241

Airport Fire (864) 848-6216

Airport IT (864) 848-6239

Airport Operations (864) 848-6233

Airport Operations Center (AOC) (864) 848-6246

Airport Operations Duty Manager (864) 414-6422

Airport Police (864) 848-6240

**Emergency (Police, Fire, EMS) 911 or (864) 848-6246**

## **APPENDIX**



GREENVILLE-SPARTANBURG

AIRPORT DISTRICT



GSP BADGING MANUAL

7.1.2022

## GSP BADGING MANUAL (10.21.19)

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## GSP BADGING MANUAL (10.21.19)

### Section 1 - General Information

1.1. This manual outlines the various Authorized Signatory (Signatory) roles and responsibilities as well as the rules and procedures involved for receiving an Airport issued badge. The Signatory roles/responsibilities and rules/procedures outlined in this document must be strictly followed; failure to follow may result in various penalties.

1.2. The GSP Badging office is responsible for issuing Airport badges, assigning and maintaining access to Airport facilities, issuing vehicle permits, and verifying applicants and employees have cleared the required Security Threat Assessment (STA) and Criminal History Record Check (CHRC) prior to receiving their Airport badge.

### Section 2 – Definitions

2.1. Airport – the Greenville-Spartanburg Airport District (District).

2.2. Air Operations Area (AOA) - means a portion of the airport, specified in the airport security program, in which security measures specified in 49 CFR part 1500 are carried out. This area includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas for use by aircraft regulated under 49 CFR Part 1544 or 1546, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures. This area does not include the Secured Area

2.3. Applicant – an individual who is applying for an Airport issued badge.

2.4. Authorized Signatory (Signatory) – any individual or designated representative authorized to sponsor individuals and request an Airport issued badge.

2.5. Badge – includes any of the seven (7) different badge types issued by the Airport Badging office that signifies unescorted access to the AOA, SIDA, Secured or Sterile areas of the Airport.

2.6. Badge Holder – an individual who holds an Airport issued badge.

2.7. Badge Renewal - refers to the renewal of an active badge that is set to expire, is damaged, the badge holders name has changed, badge type change request, or is lost/stolen.

2.8. Badge Termination - refers to any termination/disaffiliation of a badge holder from a company/organization affiliated with the Airport.

2.9. Criminal History Record Check (CHRC) – a search for an individual's past criminal history by submitting the individual's fingerprints and biographic information to the

## GSP BADGING MANUAL (10.21.19)

Federal Bureau of Investigation (FBI) Criminal Justice Information System (CJIS), and reviewing any criminal history records that CJIS returns.

2.10. Initial Badge Issue - refers to the issue of a badge for a new employee or affiliate of a based tenant to include STA/CHRC processing and SIDA/Non-Movement Area training.

2.11. Non-Movement Area - airport areas that include aprons (ramps) not under control by the ATCT. At GSP, the non-movement area consists of the South Cargo Apron; Air Carrier Apron; Itinerant Apron; Maintenance, Repair and Overhaul (MRO) Apron; General Aviation (GA) apron; North Cargo Apron; and various access roads.

2.12. Secured Area – the portion of the Airport, specified in the Airport Security Program (ASP), in which security measures specified in Title 49 of the Code of Federal Regulations are carried out. This area is where aircraft operators and foreign air carriers that have a security program under part 1544 or 1546 enplane and deplane passengers and sort and load baggage and any adjacent areas that are not separated by adequate security measures.

2.13. Security Identification Display Area (SIDA) - the portion of an Airport, specified in the Airport Security Program (ASP), in which security measures specified in Title 49 of the Code of Federal Regulations are carried out. This area includes the secured area and may include other areas of the Airport.

2.14. Security Threat Assessment (STA) – a check conducted by TSA of databases relevant to confirming (1) that an individual does not pose a security threat, (2) that an individual possesses lawful status in the United States, and (3) an individual's identity.

2.15. Sterile Area – the portion of the Airport defined in the Airport Security Program (ASP) that provides passengers access to boarding aircraft and to which that access generally is controlled by TSA, or by an aircraft operator under Part 1544 of 49 CFR chapter XII or a foreign air carrier under part 1546 of said chapter, through the screening of persons and property.

2.16. Trusted Agent (TA) – a District employee who collects information from applicants and current Airport issued badge holders used in the CHRC and STA, transmits the information to a Designated Aviation Channeler (DAC), authorizes the issuance of badge media, or issues the badge media.

### Section 3 – Authorized Signatory Roles and Responsibilities

3.1. In accordance with the TSA Security Directive SD 1542-04-08 (current version), the Greenville-Spartanburg International Airport (GSP) is required to have an "Authorized Signatory" for each tenant or affiliate of the Airport. This directive requires GSP to have

a training program for all persons designated as Authorized Signatories in the Airport's badging process. This document serves to validate and verify the required Authorized Signatory training.

3.2. The Signatory shall initiate and authorize all badge issues, renewals, and/or terminations for his/her affiliates following the procedures outline herein. The Signatory will serve as primary point of contact for all badging matters for the Airport Badging Office and the Airport Security Coordinator (ASC).

3.3. The Airport will designate/approve the number of Signatories for each company/organization based upon operational needs.

3.4. The Authorized Signatory roles and responsibilities include the following:

3.4.1. Must possess an Airport issued badge prior to receiving Authorizing Signatory authority.

3.4.2. Must ensure employees complete the badge application under the Signatory's authority to include verifying the application is correctly completed prior to the initial badge appointment.

3.4.3. Will authorize the necessity of badge issues and renewals for each applicant and badge holder.

3.4.4. Will understand and obey the badging fees and penalties.

3.4.5. Must ensure employees are aware of Airport badging fees and submission of valid identification and work authorization before the badging process begins.

3.4.6. Must immediately notify the Airport Badging office when:

3.4.6.1. A badge holder has been terminated or suspended.

3.4.6.2. A badge holder has lost his/her badge.

3.4.6.3. Knowledge that the access control system or component of the system has been compromised or threatened by any means.

3.4.6.4. Changes occur in an individual's personal information, to include name changes and biographical information.

3.4.7. Must immediately notify the Badging office of anyone who currently holds an Airport issued Badge is known to have been convicted of any TSA disqualifying crimes.

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3.4.8. Will communicate to badged employees that it is their responsibility to report any changes to personal information and if a badge is lost or stolen to the Signatory immediately.

3.4.9. Will serve as the primary contact for Airport badging audits and will provide a list of employees who possess an unexpired Airport issued Badge, at the request of the Badging Office. Badging audits must be returned to the Badging Office within the requested timeframe.

3.4.10. Understand a full audit of Airport issued badges will occur every twelve (12) months, and 10% of Airport issued badges will occur every 6 months, initiated by Badging office.

3.4.11. Understand that failure to comply with any of these requirements will result in loss of Signatory authority privileges.

3.4.12. Understand that only GSP “trusted agents” will handle and maintain any personal information, Criminal History Record Checks (CHRC), Security Threat Assessments (STA), or biographical information.

3.14.13. Understand that Authorized Signatory training must be completed annually no later than the anniversary of the initial training date.

3.14.14. Understand that new employees have 7 days from their first day of employment to submit for a CHRC/STA. If the employee does not submit for a CHRC/STA within 7 days, the employee is no longer eligible to be escorted into the AOA, SIDA, Secured area, or Sterile area.

3.14.15. Understand employees that have submitted for a CHRC/STA and the results are pending may be escorted.

3.14.15.1. Employees have 10 days from the date of notification for the CHRC/STA results to complete SIDA training and receive their badge.

3.14.15.2. If after 10 days the employee has not completed the SIDA training and received their badge, they are no longer eligible to be escorted into the AOA, SIDA, Secured area, or Sterile area.

### Section 4 – Office Hours and Contact Information

4.1. The Badging office is open Monday-Friday (excluding holidays) from 8:00 am – 4:00 pm. The office is closed for lunch (12:00 pm – 1:00 pm). Appointments are scheduled from 8:30 am – 11:30 am and 1:30 pm – 3:00 pm.

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4.2. Primary method for scheduling/requesting appointments is submitting a request via the appointment calendar located on the [gspairport.com](http://gspairport.com) website (under About GSP > On-site services > Badging Office). Signatory information must be submitted with the appointment request. All appointment requests must be submitted through the appointment calendar.

4.3. Reporting a lost or stolen badge. During business hours, contact the Badging office via e-mail or phone. During non-business hours, contact the Airport Operations Center (AOC) at 864-848-6246.

4.4. Access control issues/damaged badges. During business hours, contact the Badging office via e-mail or phone. During non-business hours, contact the AOC (864-848-6246) ONLY if the issue is URGENT.

4.5. Office location - 2000 GSP Drive Greer, SC 29651. The office is located north of the main terminal, in the district offices under/in front of the Air Traffic Control Tower.

### Section 5 – Schedule of Fees

5.1. The Badging office accepts cash, check and credit/debit cards to collect payment for the various fees and charges. The option to establish an account with the Airport is also available. Contact the Airport District's Accounting department to establish an account.

5.2. The following fees must be collected at time of appointment, failure to provide payment will result in the appointment to not be processed and re-scheduled as required.

5.2.1. Initial Badge Issue (STA & CHRC) - \$65.00

5.2.2. Initial Badge Issue (STA only) - \$35.00

5.2.3. Badge Renewal - \$30.00

5.2.4. Damaged Badge Renewal - \$15.00

5.2.5. Lost Badge Renewal - \$50.00 (1<sup>st</sup> time), \$150.00 (2<sup>nd</sup> time), \$250.00 (3<sup>rd</sup> time)

5.2.5.1. If the badge is found and returned prior to expiration, half the fee will be refunded.

5.3. Failure to Return upon termination - \$50.00 per week, not to exceed \$500.00

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5.3.1. If a badge is not turned in to the Badging office within 24 hours of a badged employee's termination, a \$50.00 fee will be applied to the applicable company/Signatory. A \$50.00 fee will continue to be billed to the company/Signatory (per week and up to \$500.00) until the badge is returned. Additionally, the Airport Security Coordinator (ASC) may elect to not issue/renew another badge for the company who signed for the unreturned badge until the badge in question is returned.

5.4. Employee Parking - \$30.00 monthly per employee (billed direct to company).

5.5. Tenant/Employee Management Parking - \$50.00 monthly per manager.

5.6. Parking hang tag replacement fee - \$25.00

5.7. Failure to Return Parking Hang Tag - \$50.00 per week, not to exceed \$500.00

5.7.1. If a parking hang tag is not turned in to the Badging office within 24 hours of a badged employee's termination, a \$50.00 fee will be applied to the applicable company/Signatory. A \$50.00 fee will continue to be billed to the company/Signatory (per week and up to \$500.00) until the parking hang tag is returned.

5.8. Fingerprint cards - \$15.00 (includes two copies).

### Section 6 – Initial Badge Issue Procedures

6.1. To receive a badge with unescorted access to the SIDA, AOA, Secured, or Sterile areas requires two appointments with the Badging office. The first appointment includes the processing of the badge application through an STA and/or CHRC. Upon receiving clearances back from TSA/FBI, the second appointment will be scheduled to complete the process (badge issue) and complete the SIDA/Non-Movement Area Driver's training

6.2. First appointment procedures/requirements:

6.2.1. The Signatory must request an appointment with the Badging office (See Section 4 – Contact Information). Walk-ins are not accepted; an appointment must be requested and scheduled.

6.2.2. Completion of the Security Badge Application (GSP Form ID-01). Section 5 of the application must be completed by the Signatory. Section 1, 2, 3, and 4 must be completed by the applicant. The Signatory must review Section 1, 2, 3, and 4 for accuracy and completion prior to appointment. If any of the sections are not completed at time of appointment, the application will not be processed and the appointment will be re-scheduled.



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6.2.2.1. The Signatory must only approve escort authority for those employees with an absolute need to do so.

6.2.2.2. The Badging office will not accept photo copied applications; the application must be the original.

6.2.3. Valid Identification and Work Authorization. The applicant must provide proper identification as outlined in the “Lists of Acceptable Documents” attached to the most current “Form I-9, Employment Eligibility Verification” at time of appointment (see [www.uscis.gov/files/form/I-9.pdf](http://www.uscis.gov/files/form/I-9.pdf)). Failure to provide valid identification will require the appointment to be rescheduled.

6.2.3.1. US citizens born abroad MUST provide ONE of the following – a US Passport, a Certificate of Naturalization, or a Certificate of Birth Abroad.

6.2.3.2. Non-US citizens MUST provide – an Alien Registration Number, OR a Foreign Passport AND an I-94/I-94A Arrival/Departure Form.

6.2.4. Payment is required at time of appointment (see Section 5 – Schedule of Fees). Failure to provide payment will require the appointment to be rescheduled.

6.2.5. The first appointment typically takes 15-30 minutes to process.

6.2.6. STA and CHRC clearances can take 3-14 business days to receive results.

6.3. Second appointment procedures/requirements:

6.3.1. The Badging office will contact the Signatory upon receiving an approved STA and non-disqualifying CHRC to schedule a second appointment.

6.3.2. IMPORTANT – the applicant has *30 days* from the day the Badging office made contact with the Signatory to be issued a badge. In failing to do so, the applicant will have to start the badge process over which includes a new application, re-submission of security clearances and charged associated fees.

6.3.3. A 60 day extension may be provided if disputing a STA or CHRC result.

6.3.4. Requesting a copy of STA/CHRC results. Only the applicant may request a copy of their STA or CHRC results, such request must be in writing addressed to the Airport Security Coordinator per the ASP.

6.3.5. The applicant must complete the computer based SIDA/Non-Movement Area Driver's training before the badge is issued.

6.3.6. The second appointment typically takes from 25-45 minutes to process.

## Section 7 – Badge Renewal Procedures

7.1. Airport issued badges must be renewed at least once every 2 years. An employee's badge that is set to expire can be renewed no earlier than 60 days prior to or no later than the expiration date of the employee's badge. There are five types of badge renewals; expired, lost or stolen, name change, and badge type change (to include adding escort authority).

7.1.1. IMPORTANT – Expired badge holders are not authorized to work in the AOA, SIDA, Sterile or Secured Areas nor can they be escorted by an active/unexpired badge holder. Additionally, if a badge is not renewed within *30 days* past expiration then the employee must be re-submitted through the entire badge process to include completion of a new application, re-submission of security clearances and charged associated fees.

7.2. Expired badge renewal procedures/requirements:

7.2.1. The Signatory must request an appointment with the Badging office (See Section 4 – Contact Information). Walk-ins are not accepted; an appointment must be requested and scheduled.

7.2.2. Completion of the Security Badge Renewal Application (GSP Form ID-02). Section 4 of the application must be completed by the Signatory. Section 1, 2, and 3 must be completed by the applicant. The Signatory must review Section 1, 2, and 3 for accuracy and completion prior to appointment. If any of the sections are not completed at time of appointment, the application will not be processed and the appointment will be re-scheduled.

7.2.2.1. The Badging office will not accept photo copied applications; the application must be the original.

7.2.3. Valid Identification and Work Authorization. The applicant must provide proper identification as outlined in the "Lists of Acceptable Documents" attached to the most current "Form I-9, Employment Eligibility Verification" at time of appointment (see [www.uscis.gov/files/form/I-9.pdf](http://www.uscis.gov/files/form/I-9.pdf)). Failure to provide valid identification will require the appointment to be rescheduled.

7.2.4. Payment is required at time of appointment (see Section 5 – Schedule of Fees). Failure to provide payment will require the appointment to be rescheduled.

7.2.5. The employee's badge that is set to expire must be turned in at time of appointment, failure to do so will require the appointment to be rescheduled.

7.2.6. CHRC resubmission. The employee will be resubmitted through a CHRC at time of appointment. If the result of the CHRC discloses an arrest for any disqualifying criminal offense, the Badging office will immediately revoke electronic access and contact the Signatory to retrieve the badge.

7.2.7. The applicant must complete the computer based Renewal SIDA/Non-Movement Area Driver's training before the badge is issued.

7.2.8. The renewal appointment typically takes 15-30 minutes to process.

7.3. Lost or stolen badge renewal procedures/requirements.

7.3.1. The Signatory or badge holder must immediately contact the Badging office (See Section 4 – Contact Information) to report the lost or stolen badge so electronic access can be revoked. A police report must be provided at time of renewal appointment for stolen badges only.

7.3.2. The Signatory must request an appointment with the Badging office (See Section 4 – Contact Information). Walk-ins are not accepted; an appointment must be requested and scheduled.

7.3.3. Completion of the Security Badge Renewal Application (GSP Form ID-02). Section 4 of the application must be completed by the Signatory. Section 1, 2, and 3 must be completed by the applicant. The Signatory must review Section 1, 2, and 3 for accuracy and completion prior to appointment. If any of the sections are not completed at time of appointment, the application will not be processed and the appointment will be re-scheduled.

7.3.3.1. The Badging office will not accept photo copied applications; the application must be the original.

7.3.4. Payment is required at time of appointment (see Section 5 – Schedule of Fees). Failure to provide payment will require the appointment to be rescheduled.

7.3.5. Dependent upon when the lost/stolen badge is set to expire, a CHRC re-submission may or may not be required.

7.4. Name change badge renewal procedures/requirements:

7.4.1. The Signatory must request an appointment with the Badging office (See Section 4 – Contact Information). Walk-ins are not accepted; an appointment must be requested and scheduled.

7.4.2. Completion of the Security Badge Renewal Application (GSP Form ID-02). Section 4 of the application must be completed by the Signatory. Section 1, 2, and 3 must be completed by the applicant. The Signatory must review Section 1, 2, and 3 for accuracy and completion prior to appointment. If any of the sections are not completed at time of appointment, the application will not be processed and the appointment will be re-scheduled.

7.4.2.1. The Badging office will not accept photo copied applications; the application must be the original.

7.4.3. Valid Identification and Work Authorization. The applicant must provide proper identification as outlined in the “Lists of Acceptable Documents” attached to the most current “Form I-9, Employment Eligibility Verification” at time of appointment (see [www.uscis.gov/files/form/I-9.pdf](http://www.uscis.gov/files/form/I-9.pdf)). When providing two forms of ID, both ID’s must match the new name change. Failure to provide valid identification will require the appointment to be rescheduled.

7.4.4. Payment is required at time of appointment (see Section 5 – Schedule of Fees). Failure to provide payment will require the appointment to be rescheduled.

7.4.5. STA and CHRC resubmission. The employee will be resubmitted through an STA and CHRC at time of appointment due to the name change. If the result of the CHRC discloses an arrest for any disqualifying criminal offense, the Badging office will immediately revoke electronic access and contact the Signatory to retrieve the badge.

7.5. Badge type change renewal procedures/requirements:

7.5.1. The Signatory must request an appointment with the Badging office (See Section 4 – Contact Information). Walk-ins are not accepted; an appointment must be requested and scheduled.

7.5.2. Completion of the Security Badge Renewal Application (GSP Form ID-02). Section 4 of the application must be completed by the Signatory to include noting what badge type to change to. Section 1, 2, and 3 must be completed by the applicant. The Signatory must review Section 1, 2, and 3 for accuracy and completion prior to appointment. If any of the sections are not completed at time of appointment, the application will not be processed and the appointment will be re-scheduled.

7.5.2.1. The Badging office will not accept photo copied applications; the application must be the original.

7.5.3. Payment is required at time of appointment (see Section 5 – Schedule of Fees). Failure to provide payment will require the appointment to be rescheduled.

## Section 8 – Termination/ Disaffiliation Procedures

8.1. All Airport issued badges and parking hang tags are the property of the Airport District and must be returned immediately under the following conditions:

8.1.1. Upon separation/termination of employment (for any reason).

8.1.2. When job function no longer requires an Airport issued badge.

8.1.3. Upon demand of the GSP Airport District.

8.1.4. Upon conviction of any of the disqualifying crimes (see CFR Title 49: Transportation § 1542.209 letter (d) for a list of disqualifying crimes).

8.2. The Signatory is responsible for reporting to the Badging office immediately (See Section 4 – Contact Information) of any badged employee under their authority who has terminated employment either voluntarily or involuntarily so electronic access can be revoked.

8.3. After contacting the Badging office, the Signatory must turn in the badge, parking hang tag (if applicable), and Notification of Termination form (GSP Form ID-03) to the badging office within 24 hours of initial contact.

## Section 9 – Aircraft Operator CHRC Results

9.1. The Badging office will accept CHRC's from aircraft operators (Delta, Southwest, etc.) that are submitted under the appropriate fingerprint agency code.

9.2. The aircraft operator must provide the Badging office, in writing, the following for an employee who has undergone a CHRC via the aircraft operators fingerprint agency code.

9.2.1. Certification that the applicant has undergone a CHRC in accordance with the requirements of 49 CFR 1544.229 or 1544.230 to include the date the CHRC was submitted and date the CHRC was received indicating no record of conviction for any disqualifying criminal offense under 49 CFR 1544.229 or 1544.230

9.2.2. Verification that a copy of the Privacy Act Notice in Attachment A of the SD 1542-04-08 series was provided to the employee.

## Section 10 – STA/ CHRC Transfer from another Airport

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10.1. The Badging office will only accept approved STA's and CHRC's that are sent directly from another Airports badging office for those employees/companies requesting an Airport issued badge. Upon successful transfer of clearances, the employee will be issued a badge during the first appointment.

### Section 11 – Contractor Badging Requirements

11.1. Contractors will be issued badges specific only the project or task they are working on. All contractors must return issued badges upon project completion or when they have finished the contacted work and no longer need access to the Airport facilities.

11.2. All contractors must follow the initial badge issue, badge renewal and termination procedures outline in this manual.

### Section 12 – Access Control Requests

12.1. Signatories must request in writing (via e-mail) to add or remove a door or vehicle/pedestrian gate included in the Airports access control system for any of their employees or for a change company wide. The Badging office will only accept such request from the Signatory for the company requesting the access change.

12.2. The Badging office is the approval authority, in conjunction with the Airport Security Coordinator(s), for all access changes across the Airport.

### Section 13 – 5% Lost/ Stolen/ Unaccounted for Rule

13.1. If more than 5% of all issued, unexpired badge media for any non-public area is lost, stolen, or otherwise unaccounted for, the Airport must reissue all the badge media for that non-public area (i.e. Badge type – blue, red, etc.).

13.2. If a company is responsible for breaking the 5% threshold, due to not returning badges upon termination, then that company will be responsible for covering (billed/charged) the associated costs in re-issuing the affected badge type.

### Section 14 – RAP Back

14.1. The airport is subscribed to the FBI's Rap Back service for processing fingerprints/Criminal History Record Check (CHRC). The service enables real-time recurrent information on criminal activity committed by credential-holding (badged) employees.

14.2. All non-public issued badge holders are enrolled in the RAP BACK program.

## Section 15 – Concessionaire Badge Expiration

15.1. All initial (new employment) concessionaire badges will be issued for a 6 month period, after the initial 6 months the badge will be issued for another 6 months and then renewed annually then after. The concessionaire is only responsible for payment on the initial 6-month badge issue (Initial Badge Issue charge) and then on each annual renewal (Badge Renewal charge).

## Section 16 - Tenant Management Parking Privilege

16.1. Each terminal tenant is authorized two parking passes (via License Plate Recognition) for their management team to park in Garage B.

16.2. The monthly parking rate (see Schedule of Fees) is due on the first day of each month, parking access is subject to cancellation if failure to pay by the 5<sup>th</sup> business day of each month.

16.3. LAZ Parking will issue and maintain accountability of each parking pass and will act as the main point of contact for all parking inquiries.

16.4. The District reserves the right at any time to discontinue this parking privilege at the need of the parking facilities and growth of the airport.

16.4.1. The District also has final authority of all parking pass approvals and reserves the right to deny any pass requests at its sole discretion.

## REFERENCES

The following are a list of references that pertain to Badging operations and govern the policies and procedures outlined in this manual. Contact the Badging office to review.

- Airport Security Program (ASP) *{ Sensitive Security Information }*
- Security Directive (SD) 1542-04-08 *{ Sensitive Security Information }*
- 49 CFR 1542.209 - Fingerprint-based Criminal History Records Checks (CHRC).
- GSP Air Operations Area (AOA) Manual