

PROPOSAL INFORMATION
MSCAA PROJECT NO. 19-1423-10-01

NAME OF PROJECT: A BAGGAGE MAKEUP CAROUSEL REPLACEMENT - DESIGN/BUILD

BIDS DUE: Wednesday, October 27, 2021 **TIME:** 2:00 p.m. Local Time

MEMPHIS SHELBY COUNTY AIRPORT AUTHORITY (MSCAA)
PROCUREMENT DEPARTMENT
MEMPHIS INTERNATIONAL AIRPORT
4150 Louis Carruthers Drive
Memphis, TN 38118 (901) 922-8000

PROPOSER IDENTIFICATION:

Proposer _____

Address _____

TENNESSEE CONTRACTOR LICENSE INFORMATION:

License Number _____

License Classification Applicable to Project _____

License Expiration Date _____

Dollar Limit _____

SUBCONTRACTORS (OR PRIME CONTRACTORS) TO BE USED ON THIS PROJECT IN THE BELOW LISTED CAPACITIES:

Note: Where applicable, one contractor/subcontractor performing electrical, plumbing, heating, ventilation, air conditioning, and masonry work must have its license number, applicable classification, expiration date and dollar limit on the PROPOSAL ENVELOPE containing the PROPOSAL. **Prime contractors** who are to perform the electrical, plumbing, heating, ventilation, air conditioning or masonry work MUST list themselves as "Self-Perform" in the Sub-contractor list below.

	Sub-contractor List	License No.	Applicable Classification	Expiration Date	Dollar Limit
Electrical					
Plumbing					
HVAC					
Masonry					

BID ENVELOPE

COMPLETE THIS FORM AND ATTACH IT TO THE OUTSIDE OF THE PROPOSAL ENVELOPE. PLEASE REVIEW INSTRUCTIONS TO BIDDERS/PROPOSERS FOR PROPOSAL DELIVERY AND FOR OTHER INFORMATION AND CONDITIONS. MSCAA RESERVES THE RIGHT, IN ITS SOLE DISCRETION, TO REJECT AND DISQUALIFY YOUR PROPOSAL IF YOU, YOUR PARENT, SUBSIDIARY, AFFILIATE, OR PREDECESSOR IN INTEREST OR ANY OF YOUR SUBCONTRACTORS, SUPPLIERS, AND/OR THEIR PARENTS, SUBSIDIARIES, AFFILIATES OR PREDECESSORS IN INTEREST HAVE PENDING LITIGATION OR CLAIMS WITH THE MSCAA.

SPECIFICATIONS
FOR
A BAGGAGE MAKEUP CAROUSEL REPLACEMENT - DESIGN/BUILD

MEMPHIS INTERNATIONAL AIRPORT
MEMPHIS, TENNESSEE



MSCAA PROJECT NO. 19-1423-10-01

DATED: 10/7/2021

REQUEST FOR PROPOSALS

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DIVISION 0 – SECTION 00015**LIST OF DRAWINGS**

DRAWINGS, entitled A Baggage Makeup Carousel Replacement - Design/Build, 19-1423-10-01, dated 10/7/2021, with revisions, as noted on the drawing sheets:

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LEGAL NOTICE
Request for Proposals
To Provide Design/Build Services
MSCAA Project Number 19-1423-10-01
A Baggage Makeup Carousel Replacement - Design/Build

Sealed, priced proposals for A Baggage Makeup Carousel Replacement - Design/Build will be received by the Memphis-Shelby County Airport Authority (Authority), Procurement Department, 4150 Louis Carruthers Drive, Memphis, TN 38118, until **2:00 p.m. local time on Wednesday, 10/27/21**. Proposals will not be received at any other location. Within 30 minutes thereafter, the proposal pricing will be opened and publicly read via phone/video conferencing

(<https://us06web.zoom.us/j/84136794460?pwd=QzlJTDNEb2tONHBCUFdEeW0xSnRMUT09>)

phone: (646) 876 - 9923; meeting ID: 841 3679 4460 841 3679 4460; passcode: 318811. The Proposal Documents, including a description of the scope of work, the required response format, and additional instructions may be obtained on or after **10/7/2021** online at www.flymemphis.com.

A Virtual Pre-Bid/Proposal Meeting will be held Friday, October 15, 2021, at 9:00 a.m. local time via phone/video conferencing (link: <https://us06web.zoom.us/j/87242949125?pwd=L0t5ZjYzbVhuamJ3SVVmRm1jOFBjZz09>; phone: (312) 626 6799; meeting ID: 872 4294 9125; passcode: 121842). Instructions on Pre-Bid/Proposal Meeting and Site Visit request can be found at <https://www.flymemphis.com/rfps-rfqs>. Attendance at the Pre-Bid/Proposal Meeting is strongly recommended.

All Proposers are responsible for checking the Authority's website up to the submission deadline for any updates, addenda or additional information. The successful Proposer must sign a contract with the Authority that includes Federal Aviation Administration provisions, if applicable, regarding the Buy American Preference, Foreign Trade Restriction, Davis-Bacon, Affirmative Action, Debarment and Suspension, and Drug-Free Workplace, all of which are incorporated herein by reference.

Each Proposal must be made by a contractor licensed in Tennessee and be accompanied by a 5% Proposal Guarantee. The successful proposer must execute a Performance Bond and a Payment Bond in the amount of 100% each of the Contract Price and meet the Disadvantaged Business Enterprise (DBE) participation goal for this project, which is 8%.

The Authority reserves the right to reject any or all responses to this Request for Proposals in whole or in part; to waive any informalities, technicalities, or omissions related to this Request for Proposals; and to reject responses on any other basis authorized by the Authority's purchasing policies.

The Authority is an equal opportunity employer and prohibits discrimination based on the grounds of age, race, sex, color, national origin, disability, marital status, military service, or sexual orientation in its hiring and employment practices and in the admission to, access to, or operation of its programs, services, and activities.

By order of:

Scott A. Brockman, A.A.E.

President and CEO

Memphis-Shelby County Airport Authority

DIVISION 0 – SECTION 00200**INSTRUCTIONS TO BIDDERS / PROPOSERS**

Instruction for the preparation of proposals and the delivery thereof to the Memphis-Shelby County Airport Authority (MSCAA) are contained in General Provision Section 20 and additionally as follows. Prepare and submit proposals accordingly.

1. RESERVATION OF RIGHTS:

MSCAA reserves the right, in its sole discretion, to reject and disqualify the proposal of any bidder that has pending litigation or claims with the MSCAA and to reject the bid when a parent, subsidiary, affiliate, or predecessor in interest of the Bidder has pending litigation or claims with the MSCAA.

MSCAA also reserves the right, in its sole discretion, to reject and disqualify the proposal of any bidder if the bid includes any subcontractor(s) or supplier(s) of any tier that have pending litigation or claims with MSCAA, and to reject the bid when a parent, subsidiary, affiliate, or predecessor in interest of the subcontractor or supplier has pending litigation or claims with the MSCAA.

Bidders/Proposers shall request from MSCAA a list of entities that have pending claims or litigation with MSCAA to avoid including such entities or their parents, subsidiaries, affiliates, or predecessors in interest in their proposal or bid. A list of affected entities may be obtained by a written or telephone request to Development Division at MSCAA, 2491 Winchester Road, Suite 113, Memphis, TN 38116-3856, telephone number (901) 922-8033.

2. PRE-BID/PROPOSAL CONFERENCE:

A Virtual Pre-Bid/Proposal Meeting will be held Friday, October 15, 2021 at 9:00 a.m. local time via phone/video conferencing (link: <https://us06web.zoom.us/j/87242949125?pwd=L0t5ZjYzbVhuamJ3SVVmRm1jOFBjZz09>; phone: (312) 626 6799; meeting ID: 872 4294 9125; passcode: 121842). Instructions on Pre-Bid/Proposal Meeting and Site Visit request can be found at <https://www.flymemphis.com/rfps-rfqs>. Attendance at the Pre-Bid/Proposal Meeting is strongly recommended.

3. DRAWINGS AND SPECIFICATIONS FURNISHED TO CONTRACTOR:

Electronic set of contract and proposal documents are available at <https://www.flymemphis.com/rfps-rfqs> at no cost. Printed copies are not available.

Drawings provided are for design concept/basis of design for design-build project.

4. REFUSAL OF ISSUANCE OF PROPOSAL FORM TO BIDDERS/PROPOSERS IN DEFAULT AND DISQUALIFICATION OF BIDDERS/PROPOSERS:

See General Provision Section 20 for disqualification of bidders and bidders in default.

5. SUBMIT THE FOLLOWING WITH THE BID IN THE MANNER DESCRIBED BELOW:

- A.
 - (1) Proposal
 - (2) Proposal Guarantee (Required Bid Security)
 - (3) DBE Assurance Statement/Letter of Intent on Bidder's / Proposer's Letterhead for each DBE subcontractor, subcontractors' signatures not required.
 - (4) Written quote or proposal or other communication from each DBE upon which the scope of work and dollar value contained in your Assurance Statements is based with items included in the Proposal either circled and/or highlighted.

- (5) DBE Goals Accomplishment Statement
- (6) Information on All Firms that Provide Bids or Quotes
- (7) Signed addenda (if applicable)
- (8) Summary (on company letterhead) of respondent's proposed team, qualifications, and schedule. Discussions must include:
 - a. Names of all known companies on team (regardless of local or DBE affiliation at all levels of subcontracting, to the best of the respondent's ability.
 - b. Names of all companies on team who have their headquarters in Shelby County, Tennessee. Include percentage of total base bid value allocated to companies who have their headquarters in Shelby County, Tennessee
 - c. Names of all companies on team who have DBE certifications. Include percentage of total base bid value allocated to companies who have DBE certifications.
 - d. Respondent team's (designer and contractor) specialized experience and technical competence in baggage conveyance systems. Provide firm's previous experience (minimum 5 yrs) in similar baggage conveyance projects. Include project size and cost; description of work involved; and baseline schedule target date vs. actual substantial completion date.
 - e. Respondent's proposed total construction duration, if less than the 217-day schedule described in specification 01100. Longer schedules will not be considered. If a contract is awarded to a respondent who proposes a shorter total duration schedule, the respondent's schedule in this summary will become the contractual obligation.

B. The following must be submitted within 24 hours of the proposal submittal deadline:

- (1) DBE Assurance Statement/Letter of Intent on Bidder's / Proposer's Letterhead for each DBE subcontractor, subcontractors' signatures required.

See General Provision Section 20, PROPOSAL REQUIREMENTS AND CONDITIONS.

- C. By executing the proposal submittal, the Contractor is confirming that (1) neither the Contractor nor any of Contractor's potential subcontractors or suppliers have pending claims or litigation, arbitration, or other dispute resolution proceedings where the Owner and the Contractor or potential subcontractors or suppliers are parties; or (2) the Contractor has disclosed in writing any such pending claims or proceedings to Owner through its own writing and/or the writing of Contractor's potential subcontractors or suppliers and submitted same to Owner with the proposal submittal.
- D. Bids should be delivered to the following address:

Memphis-Shelby County Airport Authority
 Procurement Department
 Memphis International Airport
 4150 Louis Carruthers Drive
 Memphis, TN 38118
 Project No. 19-1423-10-01

The proposal must be sealed and the project number must be included in the address.

Please note that proposals will not be accepted at any other location. Proposals delivered to any other address will be rejected. Within 30 minutes thereafter, the bids proposal pricing will be opened and publicly read via phone/video conferencing (Link: <https://us06web.zoom.us/j/84136794460?pwd=QzIJTDNEb2tONHBBCUFdEeW0xSnRMUT09>) phone: (646) 876 - 9923; meeting ID: 841 3679 4460 841 3679 4460; passcode: 318811.).

6. EVALUATION OF PROPOSALS:

The Owner reserves the right to reject any or all proposals in whole or in part and to waive any informalities, technicalities, or omissions therein.

MSCAA will review all proposals for completeness and adherence to the requirements of this RFP. MSCAA has established the following specific criteria to evaluate RFP responses. Each criteria category will be given a score, based on a compilation of the factors, but the factors are not individually weighted. The Designer and Contractor may be same entity if the qualifications and experience levels allow.

- A. EXPERIENCE AND QUALIFICATIONS OF DESIGNER (0-20 points)
 - (1) Respondent design team's specialized experience and technical competence in baggage conveyance systems.
- B. EXPERIENCE AND QUALIFICATIONS OF CONTRACTOR (0-20 points)
 - (1) Respondent team's specialized experience and technical competence in baggage conveyance systems, including meeting project schedules.
- C. TOTAL PROJECT SCHEDULE (0-10 points)
 - (1) Total Project schedule.
- D. TOTAL PROJECT COST (0-40 points)
 - (1) Total Project price proposal.
- E. M/W/DBE PARTICIPATION (0-10 points)
 - (1) Commitment and ability to meet (or exceed) established DBE Goal.

MSCAA will make a selection based on review of the submitted proposals in accordance with the above criteria.

7. NO FINANCIAL INTEREST:

Respondent understands and agrees that no Airport Authority employee or member of the Board of Commissioners shall receive any financial benefit arising out of this proposal or its contract, if awarded, either directly or indirectly. Further, any fees paid to any person or entity by contractor for assistance in obtaining this contract, if awarded, with the Authority must be fully disclosed to the Authority.

8. PROTEST:

- A. Any protest must be filed in writing and received by the Authority within seven (7) calendar days of the date of the occurrence of the event that is the subject of the protest, e.g., the opening of responses, the award, or a determination that a respondent is not responsible or that a response is not responsive. Any protest must be actually delivered to the Authority during the business hours of 7:00 AM – 3:30 PM Local Time in order to be deemed to be received by the Authority as required under this Section. A protest must be submitted in hard copy and addressed as follows:

Memphis-Shelby County Airport Authority
 Attention: Director of Procurement
 4150 Louis Carruthers Drive
 Memphis, Tennessee 38118-6613

Any protest sent by telegraphic or facsimile transmission or by email or other electronic means will not meet the filing requirements set forth herein and will not be deemed to be received by the Authority.

No objections with regard to the application, meaning, or interpretation of the specifications contained herein will be considered after the opening of the subject bid.

END OF SECTION 00200

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DIVISION 0 – SECTION 00405

PROPOSAL

Project Identification: **A Baggage Makeup Carousel Replacement - Design/Build**

Contract Number: MSCAA Project No. **19-1423-10-01**

For Overnight Courier or Hand Delivery Submit to:

Memphis-Shelby County Airport Authority
Memphis International Airport
Procurement Department
4150 Louis Carruthers Drive
Memphis, Tennessee 38118

1. The undersigned Bidder proposes and agrees, if this Proposal is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Proposal and in accordance with other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Legal Notice to Bidders and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Proposal will remain subject to acceptance for seventy-five (75) days after the day of Proposal opening. Bidder will sign and submit the Construction Contract with the Bonds and other documents required by the Bidding Requirements, within ten (10) days after the date of Owner's Notice of Award.
3. In submitting this Proposal, Bidder represents, as more fully set forth in the Contract that:

- (a) Bidder has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date	Number
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

- (b) Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

- (c) Bidder has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in Division 0 and Division 1 Specifications, and accepts the determination set forth in General Provision Section 20 paragraph 20-06 of the extent of the technical data contained in such reports and drawings upon which Bidder is entitled to rely.
- (d) Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement those referred to in (c) above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with other terms and conditions of the Contract Documents, including specifically the provisions of General Provision Section 20 paragraph 20-06; and no additional examination, investigations, explorations, tests, reports or similar information or data are or will be required by Bidder for such purposes.
- (e) Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by Bidder in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents.
- (f) Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- (g) Bidder has given Owner or Engineer written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by Owner or Engineer is acceptable to Bidder.
- (h) This Proposal is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Proposal; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

4. Proposer will complete the Work for the following price(s).

ITEM NO.	DESCRIPTION	UNIT	TOTAL EST. PRICE
1	DESIGN OF "A" BAGGAGE MAKEUP CAROUSEL REPLACEMENT	LS	\$
2	CONSTRUCTION OF "A" BAGGAGE MAKEUP CAROUSEL REPLACEMENT	LS	\$
3	MOBILIZATION (FIXED COST)	LS	\$ 70,000
4	DEMOBILIZATION (FIXED COST)	LS	\$ 42,000
TOTAL PROPOSAL (TOTAL OF LINE ITEMS 1-4)			\$ _____

TOTAL PROPOSAL (TOTAL OF LINE ITEMS 1-4):

 (use words)

(\$ _____)

5. The Owner reserves the right to reject any or all bids in whole or in part and to waive any informalities, technicalities, or omissions therein.

Bidder understands and agrees that, after a review of all the proposals, the Owner will select the proposal that best suits the Owner's needs within the sole discretion of the Owner. The proposals will be evaluated based upon the respondent's price, experience and qualifications, local participation, DBE participation, team, and proposed schedule. The Bidder further understands and agrees that it has no right to protest or object to the proposal that is selected by the Owner.

6. Bidder agrees that the Work: will be completed and ready for final payment within the calendar days (as described in Section 01100) after the date when the Contract Time commences to run. Bidder accepts the provisions of the Contract as to liquidated damages in the event of failure to complete the Work on time.

7. See Section 00200, INSTRUCTIONS TO BIDDERS, for a complete list of documents that are made a condition of this Proposal.

8. Communications concerning this Proposal shall be addressed to: _____
 (Printed Name)

The address of Bidder indicated above, or

the following address: _____

email address: _____

9. The terms used in this Proposal which are defined in General Provision Section 10 of the Specifications included as part of the Contract Documents have the meanings assigned to them in the Division 0 and Division 1 Specifications.

Submitted on _____, 20____.

- 10. The undersigned Bidder confirms that (1) neither Bidder nor any of Bidder’s potential subcontractors or suppliers have pending claims or litigation, arbitration, or other dispute resolution proceedings where the Owner and Bidder or Bidder’s potential subcontractors or suppliers are parties; or (2) such claims or proceedings are pending and Bidder is disclosing same through its own writing and/or the writing of Bidder’s potential subcontractors or suppliers and submitting same to Owner with this proposal submittal.

If Bidder is:

An Individual

(Individual's Printed Name)

(Individual's Signature)

doing business as: _____

Business address: _____

Phone No.: _____ FAX No. _____ E-Mail _____

A Partnership

(Firm Name)

By: _____
(Signature of General Partner and Printed Name)

Business address: _____

Phone No.: _____ FAX No. _____ E-Mail _____

A Corporation

(Corporation Name)

By: _____ Title: _____
(Signature of person authorized to sign)

(Printed Name)

(Corporate Seal)

Attest: _____
(Signature of Secretary) (Printed Name)

(State of Incorporation)

Business address: _____

Phone No.: _____ FAX No. _____ E-Mail _____

A Joint Venture

(Joint Venture)

By: _____
(Signature of Joint Venturer) (Printed Name)

(Address)

Phone No.: _____ FAX No. _____ E-Mail _____

By: _____
(Signature of Joint Venturer) (Printed Name)

(Address)

Phone No.: _____ FAX No. _____ E-Mail _____

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

END OF SECTION 00405

DIVISION 0 – SECTION 00410

PROPOSAL GUARANTEE

KNOW ALL MEN BY THESE PRESENT, that we, the undersigned, _____

_____ as Principal, and

_____ as Surety, are

hereby held and firmly bound unto Memphis-Shelby County Airport Authority as Owner, in the sum of _____ for the payment of which, well and truly to be made, the said Principal and Surety hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Whereas the Principal has submitted to Memphis-Shelby County Airport Authority a certain bid, attached hereto and hereby made a part hereof, to enter into a contract in writing for the A Baggage Makeup Carousel Replacement - Design/Build, MSCAA Project No. 19-1423-10-01.

NOW, THEREFORE, if said bid shall be rejected, or in the alternate, if said bid shall be accepted and the Principal shall execute and deliver a contract in accordance with the terms of the Contract Documents and shall furnish a bond for its faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void, otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the amount of this obligation as herein stated.

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

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

this _____ day of _____, 20_____.

PRINCIPAL

By: _____

(Name and Title)

SURETY

By: _____

(Attorney-in-Fact)

SEAL

END OF SECTION 00410

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DIVISION 0 – SECTION 00445**DISADVANTAGED BUSINESS ENTERPRISE
(DBE) REQUIREMENTS**

MSCAA operates a federal Disadvantaged Business Enterprise (DBE) Program and a non-federal Business Diversity Development Program (BDDP) to ensure full and fair opportunities in MSCAA contracting for businesses owned by socially and economically disadvantaged individuals. Memphis-Shelby County Airport Authority (MSCAA) administers both programs according to the regulations that apply to the federal program, primarily 49 CFR Part 26. Because the BDDP program applies to contracts involving non-federal funds, not every aspect of 49 CFR Part 26 is relevant to the BDDP program. In most areas, 49 CFR Part 26 will guide our operation of the BDDP including, but not necessarily limited to, rules dealing with certification and counting participation. Only firms that are certified consistent with 49 CFR Part 26 and by the MSCAA or Tennessee Department of Transportation Unified Certification Program (TN UCP), as identified below, will be considered to be certified as a Disadvantaged Business Enterprise.

This section, entitled “Disadvantaged Business Enterprise Requirements” is provided in an effort to assist Respondents. The information contained in this section is not intended to, nor does it, supplement or amend any federal regulation. All Respondents are responsible for compliance with all applicable federal and MSCAA rules and requirements.

It is a requirement that all Respondents providing services for the MSCAA take all reasonable steps to ensure that DBE have a full and fair opportunity to compete for and perform contract work without discrimination on the basis of age, race, sex, color, national origin, creed, religion, sexual orientation or disability. In order to satisfy this requirement, Respondents will be expected to timely submit documentation as identified below and throughout the contract period if selected, and cooperate with MSCAA. Failure to timely submit requested documentation, cooperate with MSCAA or answer inquiries truthfully will be considered a material contract breach and may result in termination.

The following documents must be submitted with your response to this solicitation:

DBE Assurance Statement/Letter of Intent. The Respondent must submit an Assurance Statement for each DBE whose participation the Respondent is counting toward the goal. This may include first, second, third and so on tier subcontractors and the Respondent and all subcontractors between the Respondent and the DBE should sign the Assurance Statement. The Respondent must submit this Assurance Statement on Company Letterhead.

For each Assurance Statement, the Respondent must also provide the written quote or proposal from the DBE or other communication from the DBE upon which the scope of work and dollar value contained in your Assurance Statement is based (“quote/proposal”).

For all RFQs using federal monies, the Assurance Statement(s) must still be submitted and list the DBE s to be used and their scope of work, but no dollar amount(s) is entered. Dollar amounts(s) will be submitted by the prevailing Respondent upon completion of the selection process.

All portions of the Assurance Statement must be completed (including the description of work, the estimated contract amount, and the estimated dollar value of DBE participation for counting and goal purposes) before the Assurance Statement is signed by either the DBE or the Respondent. If the DBE’s, and if applicable the 2nd/3rd Tier Subcontractor’s, signature(s) can be obtained on the completed Assurance Statement before the bid

submission deadline, the Respondent should submit the fully-completed and fully-signed Assurance Statement. If the Respondent submits an Assurance Statement that is completed except for the DBE's, and if applicable, the 2nd/3rd Tier Subcontractor's signature(s) and a quote/proposal from the DBE as described above, the Respondent will be given 24 hours from the bid submission deadline to submit the completed Assurance Statement signed by the DBE and if applicable the 2nd/3rd Tier Subcontractor. Each Assurance Statement submitted during this 24 hour window must conform to the previously submitted Assurance Statement except for DBE signature. These signed Assurance Statements must be submitted pursuant to the same location and time restrictions that applied to the solicitation response and late signed Assurance Statements will only be accepted for good cause as determined solely by MSCAA.

MSCAA reserves the right to ask questions of the Respondent, investigate and require additional information as it determines necessary in its sole discretion to ensure that the regulations and MSCAA's rules are followed as it relates to DBE participation.

Respondent DBE Goals Accomplishment Statement

Submit on Company Letterhead

Information on All Firms that Provide Bids or Quotes

We ask, but do not require, that **the Respondent** submit the following information with the response to this solicitation:

Voluntary Disclosure of Respondent Data

Definition of Socially and Economically Disadvantaged

The rules that govern eligibility and certification of DBE are found generally at 49 CFR Part 26.5 and 26.61 through 26.73. These rules define a DBE as a for-profit, small business concern which is at least fifty-one percent (51%) owned and controlled by one or more socially and economically disadvantaged individuals. In the case of any publicly owned business, at least fifty-one percent (51%) of the stock must be owned by one or more socially and economically disadvantaged individuals. In addition, the personal net worth of the socially and economically disadvantaged owners of the small business concern must not exceed one million three hundred twenty thousand dollars (\$1,320,000).

As defined by 49 CFR, Part 26.5, a socially and economically disadvantaged individual is any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is –

- (1) Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis.
- (2) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (i) “Black Americans” which includes persons having origins in any of the Black racial groups of Africa;
 - (ii) “Hispanic Americans” which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;

- (iii) “Native Americans” which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
- (iv) “Asian-Pacific Americans” which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U. S. Trust Territories of the Pacific islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;
- (v) “Subcontinent Asian Americans” which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives islands, Nepal or Sri Lanka;
- (vi) Women;
- (vii) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

DBE Liaison Officer

The DBE Liaison Officer is responsible for developing, implementing, and monitoring the DBE program on a day-to-day basis in coordination with other appropriate officials; carrying out technical assistance for a DBE ; and, disseminating information on available business opportunities so that a DBE is provided an equitable opportunity to bid on MSCAA contracts. The DBE Liaison Officer reports directly to the President of the MSCAA. For questions or information related to the DBE program, contact Joe Claiborne at (901) 922-2556.

DBE Certification

MSCAA certifies all of its DBEs through internal processes. The MSCAA compiles a directory of firms who have met the selection criteria for eligibility as a DBE, including 49 CFR Part 26. You can review the searchable directory of certified firms for MSCAA at our website (<https://mscaa.mwdbe.com/>). In the right hand column, you will find links to both the TN UCP Directory and the MSCAA DBE/ACDBE Directory. The TN UCP is a cooperative of entities which are recipients of federal funds that have developed a “one-stop shop” for certification throughout the State of Tennessee of which MSCAA is a certifying member. In order to be considered as meeting the DBE goal for a contract, each business wishing to participate as a DBE or a joint venture DBE, must either be:

- (1) **certified by the MSCAA or the TN UCP** in accordance with 49 CFR Part 26, or;
- (2) **receive affirmation from the MSCAA or the TN UCP** that their certification from another entity is consistent with and acceptable to the MSCAA or the TN UCP.

Persons or entities who consider themselves a DBE but who are not certified by MSCAA, the TN UCP as a DBE, have not received affirmation from the MSCAA or the TN UCP that their certification from another entity is consistent with and acceptable to the MSCAA or the TN UCP will not be considered. Unless a firm meets the criteria above by the time the responses to this solicitation are due, its participation will not be considered as meeting the DBE goal in the solicitation. Each business wishing to participate as a DBE or a joint venture DBE must be certified at the time of bid opening and a current copy of the DBE’s certification must be attached to the Assurance Statement.

Identification of Contract Goal and Requirements

As an example: “For this contract, the DBE goal is established as **8.00%**.” In order to be responsive, a Respondent must either meet the goal or make good faith efforts to do so. Good faith efforts are defined in Appendix A to 49 CFR Part 26 and discussed in the following section.

If a Respondent’s DBE Assurance Statement proposes a DBE percentage less than the established goal, the Respondent must, at the time of making the response, submit appropriate documentation justifying its submitted DBE percentage. MSCAA reserves the right to request additional documentation or information from Respondent regarding its DBE Assurance Statement and, if applicable, any good faith efforts documentation. If MSCAA enters into a contract based on the Respondent’s DBE Goals Accomplishment Statement and documentation, the DBE percentage accepted by MSCAA will become a contractual requirement. If the Respondent’s DBE Assurance Statement proposes to attain a DBE percentage higher than the established goal, the established goal will remain the contractual requirement.

Respondents shall not contract with, demand, require or coerce a DBE into any agreement or into the signing of any Assurance Statement or any other document which prohibits the DBE from providing subcontracting quotations or doing business with other Respondents. The DBE shall be free to provide their services to any number of Respondents. To ensure that all obligations under sub-contracts awarded to a DBE are met, the MSCAA will review the agreement between the Respondent and DBE, and Respondent’s DBE involvement efforts during the performance of the contract. The Respondent shall bring to the attention of the MSCAA any situation in which regularly scheduled progress payments are not made to a DBE. If, in the opinion of the MSCAA, the Respondent has made significant deviations from the DBE program commitments, it shall be considered a breach of contract.

Good Faith Efforts Statement and Requirements

In order to be responsive, Respondents must either meet the DBE goal or make good faith efforts to meet the goal. Respondents who do not meet the goal must establish adequate good faith efforts by submitting documentation along with the Respondent DBE Goals Accomplishment Statement. This statement should show that they took all necessary and reasonable steps to achieve the DBE goal, which could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful. The Respondent’s DBE Goals Accomplishment Statement and supporting documents should conform to the good faith requirements outlined in Appendix A of 49 CFR Part 26.

The following is a list of types of actions that may be part of a Respondent’s efforts to obtain DBE participation and may be included in the Respondent DBE Goals Accomplishment Statement and documentation. This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases:

- A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified as a DBE who have the capability to perform the work of the contract. The Respondent must solicit this interest within sufficient time to allow the DBE to respond to the solicitation and take appropriate steps to follow-up initial solicitations to determine interest.
- B. Selecting portions of the work to be performed by a DBE in order to increase the likelihood that the goals of the will be achieved.
- C. Providing any interested DBE with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- D. Negotiating in good faith with any interested DBE. It is the Respondent's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation.
- E. Not rejecting any DBE as being unqualified without sound reasons based on a thorough investigation of their capabilities.
- F. Making efforts to assist any interested DBE in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- G. Making efforts to assist any interested DBE in obtaining necessary equipment, supplies, materials, or related assistance or services.
- H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of any DBE.
- I. Making efforts to identify and assist eligible firms, which are not yet certified by the MSCAA or the TN UCP as a DBE, to obtain certification. These types of efforts will have special weight where it appears that the relevant firms will be certified in time for the execution of the contract.

If a Respondent has not met the DBE goal and submits Respondent DBE Goals Accomplishment Statement and documentation, the Respondent should summarize in detail all good faith efforts taken by the Respondent, including, but not limited to, the activities listed above in A through I, and supporting documentation. While the Respondent should submit documentation to support its good faith efforts at the time of bid submission, MSCAA may ask questions of Respondent or request additional documentation after review of Respondent's DBE Goals Accomplishment Statement and any documentation. In submitting the information required under this section, Respondent understands and agrees that the determination of whether Respondent has met the DBE goal or established good faith efforts to meet the goal is a judgment call that MSCAA will make.

COUNTING THE DBE PARTICIPATION

DBE participation shall be counted toward meeting the DBE goal as outlined in 49 CFR Part 26, especially 26.55. When **the Respondent** completes an Assurance Statement, **the Respondent** must include not only the total value of the work to be performed and/or the materials to be supplied by the DBE but also the total amount of DBE participation that should be counted toward meeting the goal. For example, if a DBE is a regular dealer or supplier of pipe but does not install the pipe, then **the Respondent** can generally count the dollar value spent on the pipe at 60%. This would mean that if the DBE was supplying \$100,000 of pipe then the contract amount would be \$100,000 but the total amount of DBE participation would be \$60,000 for counting and meeting the goal purposes. If you have any questions about counting, we strongly urge you to consult 49 CFR Part 26. The following may be helpful to you in counting DBE participation and in determining which sections of Part 26.55 you need to review in more detail:

- (a) When a DBE participates in a contract or subcontract, the provider will count only the value of the work actually performed by the DBE toward the DBE goals. In a construction contract (and other similar contracts), this will include the work performed by the DBE's own forces and supplies purchased or equipment leased by the DBE as described below, especially (d)

- (but not supplies or equipment the DBE subcontractor purchases from the prime contractor or its affiliate.) The Respondent will count the entire amount of fees or commissions charged by a DBE for providing a bona fide service toward goals provided that we determine the fees to be reasonable and not excessive. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the subcontractor is itself a DBE.
- (b) When a DBE performs as a participant in a joint venture, the Respondent will count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces toward DBE goals.
 - (c) The Respondent will count expenditures to a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract or subcontract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether a DBE is performing a commercially useful function, the Respondent will evaluate industry practices, the amount of work subcontracted, whether the amount the firm is to be paid under the contract is commensurate with work it is actually performing, and the DBE credit claimed for its performance of the work, and other relevant factors. The Respondent will determine questions of commercially useful function with regard to trucking companies under 49 CFR Part 26.55 (d).
 - (d) The Respondent will count expenditures with the DBE for materials or supplies toward DBE goal in the manner described in 49 CFR Part 26.55 (e). Please review Part 26.55(e) carefully. It is important to note that the rule counts expenditures differently based upon whether the DBE is a manufacturer as defined by the rule (normally counted at 100% percent of the cost), a regular dealer as defined by the rule (normally counted at 60% of the cost) or neither of the two (normally counted at the entire amount of fees or commissions, or fees or transportation charges, provided they are reasonable). It is important to note that materials and supplies provided by a DBE that is not a regular dealer in those materials and supplies do not count toward meeting the goal. For example, if the DBE is a regular dealer of piping, the DBE cannot purchase office equipment and then supply that office equipment to the prime and count any portion of the cost of the office equipment toward meeting the goal. Such conduct for DBE counting purposes is prohibited by the rules and is considered to be an impermissible and illegal pass-through.
 - (e) If a firm is not currently certified as a DBE, in accordance with the standards of subpart D of this part, at the time of the execution of the contract, the Respondent will not count the Firm's participation toward any DBE goals, except as provided for in 49 CFR Part 26.87(i).
 - (f) The Respondent will not count the dollar value of work performed under a contract with a firm after it has ceased to be certified toward any goals except as provided in 49 CFR Part 26.87(j).
 - (g) The Respondent will not count the participation of a DBE subcontractor toward a contractor's final compliance with its DBE obligations on a contract until the amount being counted has actually been paid to the DBE.

SANCTIONS FOR NON-COMPLIANCE

In case of the Respondent's non-compliance with DBE and/or BDDP requirements as applicable, including, but not limited to, documentation, cooperation, and truthfulness, MSCAA shall impose such contract sanctions as it may determine to be appropriate. This may include but is not limited to:

- a) Withholding of payments to the Respondent under the Contract until the Respondent complies; and/or
- b) Cancellation, termination, or suspension of the Contract, in whole or in part; and/or
- c) Payment by the Respondent to MSCAA of an amount equal to the difference in the DBE dollar value contracted for and the dollar value achieved in documented DBE participation or any lesser amount or penalty as deemed appropriate by MSCAA, which dollar value shall be considered liquidated damages for failure to perform the requirements of this Contract and for which Respondent and all of its subcontractors agree to be bound.

PROMPT PAYMENT/RETAINAGE

The Respondent agrees to pay each subcontractor under this prime contract for invoices submitted or normal progress payments for work completed satisfactorily or supplies provided satisfactorily pursuant to its contract and no later than fifteen (15) days from the receipt of each payment it receives from the MSCAA.

There is no retainage or other sums allowed to be withheld from progress payments or any other payments and any exceptions to this prompt pay/retainage provision must be requested in writing by Respondent (Contractor) and approved in writing by an MSCAA Vice-President or higher prior to the delay or withholding of any payments under this provision.

Respondent (Contractor) will include the following paragraphs in all contracts and/or agreements related to the work [under this Contract] with subcontractors or suppliers and will require all its subcontractors and suppliers to include this paragraph in any contracts and/or agreements related to the work [under this Contract] with any other third parties and any other lower tier subcontractors or suppliers:

“It is understood and agreed by all involved parties that payment for work completed satisfactorily or supplies provided satisfactorily will be made to the appropriate party no later than fifteen (15) days from receipt of payment for that work or those supplies.

There is no retainage or other sums allowed to be withheld from progress payments or any other payments and any exceptions to this prompt pay/retainage provision must be requested in writing to MSCAA and approved in writing by an MSCAA Vice-President or higher prior to the delay or withholding of any payments under this provision.”

49 CFR Part 26

The Respondent shall carry out the applicable requirements of 49 CFR Part 26 in the award and administration of MSCAA contracts. Respondent agrees to provide all its subcontractors and suppliers and to require all its subcontractors and suppliers on this project to provide a complete copy of the **Disadvantaged Business Enterprise (DBE) Requirements** of this contract to all those who provide supplies or work related to this contract and to require all those providing supplies or work to be bound by these requirements as it relates to their work related to this contract.

Project No. _____

DBE ASSURANCE STATEMENT/LETTER OF INTENT

RESPONDENT:

Name of Firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

DBE:

Name of Firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Description of work to be performed by DBE:

The Respondent is committed to utilizing the above-named DBE for the work described above. The estimated dollar value of this work is \$ _____, which is _____% the total base bid proposal.

AFFIRMATION

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

By: _____

Signature of DBE and Title

Date

Name

By: _____

Signature of 2nd/3rd Tier Subcontractor and Title

Date

Name

If the Respondent does not receive award of the prime contract, any and all representations in this letter of Intent and Affirmation shall be null and void.

By: _____

Signature of Respondent and Title

Date

Name

(SUBMIT ON RESPONDENT’S LETTERHEAD FOR EACH DBE SUBCONTRACTOR.)

RESPONDENT DBE GOALS ACCOMPLISHMENT STATEMENT

The undersigned Respondent has satisfied the requirements of the bid/proposal specification in the following manner (please complete the appropriate spaces):

_____The Respondent is committed to a minimum of 8% DBE utilization on this contract.

_____The Respondent is unable to meet the DBE goal of 8% but is committed to a minimum of _____% DBE utilization on this contract and submits the attached narrative and documentation demonstrating good faith efforts consistent with Appendix A of 49 CFR 26. **The Respondent should attach as many pages as necessary to provide a full and complete narrative and supporting documentation of good faith efforts made. This narrative must be written on company letterhead and signed.**

Please provide an explanation for the percentage quoted above:

Provide an explanation of the dollar value of DBE’s participation and compensation and how this has been determined to meet the specific goal requirements of this solicitation in whole or part.

If DBE and company will enter into a Joint Venture, please describe the terms of the relationship and attach a copy of the contract between the parties.

It is the present intent of the Respondent to utilize the specific DBE firms identified in this proposal in the execution of this contract. If for any reason, one or more of the DBE identified here are unable or unwilling to participate, the Respondent will make good faith efforts to replace the DBE with a similar DBE. The Authority DBE Good Faith Procedures are provided in this package and apply to this proposal.

Respondent’s Name: _____

State Registration No.: _____

Federal Tax ID No.: _____

By: _____
Signature and Title Date

(SUBMIT THIS PAGE ON RESPONDENT’S LETTERHEAD)

Project No. _____

VOLUNTARY DISCLOSURE OF RESPONDENT DATA

For Title VI Compliance, we ask for **voluntary disclosure** of the following information:

Gender: Male
 Female

Race: Caucasian
 Black American
 Hispanic American
 Native American
 Subcont. Asian American
 Asian-Pacific American
 Other (please specify) _____

(DO NOT SUBMIT THIS PAGE ON LETTERHEAD)

Information on All Firms that Provided Bids or Quotes to:

This requirement applies to all firms, regardless of whether they are subs or primes, regardless of the gender or race of their owners, and regardless of whether they are ultimately chosen to participate in the contract. Please list below the name, address, phone number and contact person for every firm that provided you a bid or a quote on this project – even if you ultimately decided not to use the firm in preparing your final bid. The first line should be used for the **prime contractor** on this project. All sections must be completed to the best of your ability.

MSCAA Proj./Bid No.: _____

Name of Firm	Selected? Y/N	Full Address of Firm	Point of Contact	Phone No.	DBE? Y/N	Firm Age	AGRR *
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	
						yrs	

*Footnote: Please enter the letter for the category that best identifies your annual gross revenue.

AGRR =Annual Gross Revenue Ranges:

A = Less than \$500,000 **B** = \$500,000 - \$1 Million **C** = \$1 - \$2 Million **D** = \$2 - \$5 Million **E** = Over \$5 Million

DIVISION 0 – SECTION 00490**ADDENDA AND MODIFICATIONS****1. INTERPRETATIONS - ADDENDA AND MODIFICATIONS**

- A. If, during the bidding period Bidder finds discrepancies, ambiguities, omissions, or is in doubt as to meaning or intent of Contract Documents, notify the Owner or Engineer not less than seven (7) days prior to Bid Date. All such necessary clarifications, information, interpretations or amendments shall be answered in the form of written addenda to Drawings and Specifications, and shall be issued simultaneously to all holders of complete sets of Documents.
- B. No Addenda will be issued less than two days prior to the Bid opening date. Neither the Owner nor Engineer shall be responsible for oral interpretations or instructions during the bidding period.
- C. All Addenda are incorporated by reference into the Contract. Failure of any Bidder or sub-bidder to receive any addenda shall not relieve the Bidder of any obligation with respect to the Bid.
- D. All Addenda and Modifications to the Contract Documents shall be inserted and indexed in this location behind this page.

END OF SECTION 00490

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**LUMP SUM CONSTRUCTION CONTRACT
FOR
"A" BAGGAGE MAKEUP CAROUSEL REPLACEMENT – DESIGN/BUILD**

**BY AND BETWEEN
THE MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
(CONTRACTOR NAME)**

MSCAA PROJECT NO. 19-1423-10-01

THIS LUMP SUM CONSTRUCTION CONTRACT (hereinafter referred to as "Contract") is made and entered into as of _____, between MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY, a body politic and corporate under the laws of Tennessee (hereinafter referred to as "**Owner**" or "**Sponsor**") doing business at 2491 Winchester Road, Suite 113, Memphis, Tennessee 38116-3856, and {insert **CONTRACTOR NAME**}, a {insert **LEGAL ENTITY TYPE and STATE**} doing business at {insert Contractor address}, (hereinafter referred to as "**Contractor**," "**Bidder**," or "**Offeror**"). Owner and Contractor may sometimes be referred to herein individually as "Party" or collectively as "Parties."

RECITALS

1. **WHEREAS**, the Owner desires to have constructed certain work in Memphis, Tennessee, more particularly described as "**A**" **Baggage Makeup Carousel Replacement-Design/Build**, MSCAA Project No. **19-1423-10-01** (herein referred to as "the Project"); and

2. **WHEREAS**, the Contractor desires to enter into this Contract as an independent contractor and is ready, willing and able to construct the Project in accordance with the terms and subject to the conditions of this Contract; and

3. **WHEREAS**, the "Program Manager" is to act as the Owner's representative, and the Owner will advise the Contractor in writing of the name of the Program Manager; and

4. **WHEREAS**, the "Engineer" is the Owner's representative with responsibility for design of the technical specifications, and the Owner will advise the Contractor in writing of the name of the Engineer; and

NOW, THEREFORE, in consideration of good and valuable consideration, received or to be received, the sufficiency of which the Parties acknowledge, the Parties agree as follows:

ARTICLE 1

SCOPE OF THE WORK AND TERM OF AGREEMENT

Section 1.01. Scope of the Work. The general scope of the work is more particularly described in Exhibit A, which is attached hereto and incorporated herein by reference. Contractor agrees that the Project shall be constructed in accordance with the terms of this Contract and the "Contract Documents" as defined in Article 2 of this Contract. The term "Work" includes, but is not limited to, all labor, materials, supplies, tools, equipment and services necessary to construct the Project as described in the Contract Documents, whether or not all materials and equipment are incorporated or will be incorporated in the Project; and all Work deemed necessary to fully close the Project including demobilization.

Section 1.02. Term of Agreement and Completion. The term of this Agreement shall commence upon Owner's issuance of the Notice to Proceed pursuant to Section 3.01 and shall continue until the Work is completed in accordance with the Contract Documents, unless earlier terminated by the provisions set forth in Section 23 of this Agreement.

ARTICLE 2

CONTRACT DOCUMENTS

Section 2.01. Definition. The “Contract Documents” include this Contract, the Legal Notice, Instructions to Bidders, the Proposal, the Proposal Guaranty, the drawings and the specifications, the Federal Aviation Authority (“FAA”) General Provisions (“GP”), all addenda, and exhibits or modifications to any of them, issued prior to or after execution of this Contract. The Contract Documents are more particularly described in Exhibit B, which is attached hereto and incorporated herein by reference. As used in this Contract, a “modification” is either:

- (a) a written and signed Contract Amendment to this Contract; or
- (b) an accepted Request for Proposal (“RFP”); or
- (c) an Engineer’s Supplemental Instruction (“ESI”); or
- (d) a Construction Change Directive (as defined in Section 9.02(c) of this Contract).

Section 2.02. Intent of Contract Documents. The intent of the Contract Documents is to include all design, architecture and engineering, except as otherwise expressly provided in the Contract Documents, materials, appliances, labor and services of every kind necessary for the proper execution of the Work and the terms and conditions of payment for the Work. The Contract Documents are to be considered as one document, and whatever is called for by any one of the Contract Documents shall be as binding as if called for by all.

Section 2.03. Coordination of the Contract, Plans and Specifications. This Contract, the plans, specifications, and all referenced standards cited in the Contract Documents are essential parts of the Contract requirements. A requirement occurring in one of the Contract Documents is as binding as though occurring in all. They are intended to be complementary and used to describe and provide for a complete project. In case of dimensional discrepancies, calculated dimensions will govern over scaled dimensions. In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities:

- (a) This Contract.
- (b) The Addenda, with those of later date having precedence over those of earlier date.
- (c) The Technical Specifications.
- (d) The Plans.
- (e) Cited standards for materials or testing and cited FAA General Provisions and advisory circulars.

Section 2.04. Errors in Contract Documents. Prior to commencing the Work, the Contractor shall review all of the Contract Documents for the purpose of identifying any error, inconsistency, omission, discrepancy or variance that may be contained therein. If the Contractor finds any error, inconsistency, omission, discrepancy, or variance in the Contract Documents, it shall notify the Owner at least ten (10) days before beginning the affected portion of the Work. The Owner shall make any correction, interpretation, or clarification promptly, basing its decision on the intent of the Contract Documents. Failure of the Contractor to timely notify the Owner of any such error, inconsistency, discrepancy, or variance within the time provided by this paragraph shall bar the Contractor from making any claim for additional time or compensation caused by any such error, inconsistency, discrepancy, or variance even if the error, inconsistency, discrepancy or variance caused the Contractor to incur additional expense or time of performance.

ARTICLE 3

PROGRESS OF THE WORK

Section 3.01. Commencement and Completion. The Contractor shall commence the Work upon receipt of the written Notice to Proceed, as defined in Section 01100 of the Specifications, from the Owner and shall achieve substantial

completion of the Work, as defined in Section 01100 of the Specifications. The Contractor warrants that it will deliver the Project to the Owner free from any and all mechanics' liens or other encumbrances. Contractor further agrees to promptly (which is defined for purposes of this paragraph as no more than three (3) days from receipt of any lien or other notice) notify the Owner of the existence of any and all mechanics' liens filed by any subcontractors, materialmen, suppliers or sub-subcontractors. If any mechanics' liens are filed, Contractor shall, at its expense, bond off any such mechanics' liens within three (3) days from receipt of a written request of Owner to do so. Time is of the essence, and the substantial completion date may be altered only as provided in this Contract. Substantial completion shall occur when the Work is sufficiently complete in accordance with the Contract Documents, so the Owner can occupy or utilize the Work for its intended use, and when only minor punch list work remains to be done and a certificate of occupancy has been issued. The Owner will, upon written request of the Contractor, issue a certificate establishing the substantial completion date at any time after substantial completion has occurred.

Section 3.02. The Progress Schedule. Contractor shall fully comply with the requirements for scheduling the Work as set forth in Section 01100 and Section 01320 of the Specifications. The Owner reserves the right to reschedule the Work, or the sequence of the activities of the Contractor, for no additional compensation should Owner deem such rescheduling to be in its best interest. At least fifteen (15) days prior to the due date of the first payment to be made hereunder by the Owner and thereafter on a monthly basis, the Contractor shall submit to the Owner a cash flow projection depicting the projected monthly cash flow for the entire Project.

Section 3.03. Extension of Substantial or Final Completion Date.

(a) Except as otherwise expressly provided herein, the "Substantial Completion Date" or "Final Completion Date" shall be extended only for such number of calendar days that the Work is actually delayed by a casualty, a fire, or a Contract Amendment (hereinafter referred to as "Excusable Delays"). No extensions to the Substantial Completion Date shall be granted due to the negligence or fault of the Contractor or its subcontractors, non-availability of materials or non-availability of labor. No extension to the Substantial Completion Date shall be granted for the period of time during a delay in the performance of the Work which is caused in part by the Owner, the Engineer, and in part by the Contractor or one for whom the Contractor is responsible ("Concurrent Delay"). A request for a time extension based upon inclement weather shall be governed by the provisions of Section 01320 (3.05) of the Specifications.

(b) In order to obtain an extension of the Final Completion Date or the Substantial Completion Date due to an Excusable Delay, the Contractor in each instance shall give written notice to the Owner within seven (7) days after the occurrence of each Excusable Delay. If the Contractor fails to issue written notice to the Owner, its right to an extension, if any, will be deemed waived. The Owner shall render a written decision, which shall be made in good faith, granting or refusing the request of the Contractor for an extension within a reasonable time after receipt of the request for a time extension. If a Contract Amendment is agreed to by the Contractor and Owner, any extension of the Substantial Completion Date caused by the Contract Amendment work must be stated in the Contract Amendment and the Contractor will be barred from later seeking an extension to the Substantial Completion Date or Final Completion Date because of the Contract Amendment work. No extension to the Substantial Completion Date or the Final Completion Date shall be granted due to the aggregate number of Contract Amendments.

Section 3.04. No Damage for Delay. Contractor agrees to perform the Work and to require the subcontractors to perform the Work in a timely and proper method so as to meet the dates reflected on the progress schedule. In the event that the Contractor is delayed in the performance of the Work through no fault of the Contractor or its subcontractors, and for causes set forth in Section 3.03(a), and defined therein as Excusable Delay, then the Contractor may seek a time extension in accordance with the provisions of Section 3.03(b). Contractor agrees that such time extension is its sole and exclusive remedy for any damages regardless of the cause of such delays. Contractors also agrees that the Owner shall not be liable for any other monetary damages sustained by Contractor for acceleration, disruption, inefficiencies, suspension or resequencing of the Work or any other damages related to the progress schedule regardless of the cause of such damages. The Owner shall not be liable for consequential damages of any nature for any reason at any time.

Section 3.05. Liquidated Damages. Per Section 01100 of the Specifications, liquidated damages will be assessed for the Project. The Contractor shall proceed with the Work at such rate of progress to ensure full completion within the specified duration.

ARTICLE 4

PAYMENT

Section 4.01. Lump Sum Price. The Owner and Contractor agree that the Contractor shall be paid the following price **Thousand and 00/100 Dollars (\$000.00)** ("Lump Sum Price") for all of the Work and other obligations to be performed by the Contractor in the base bids. The Lump Sum Price shall include all profit and overhead, including without limitation field overhead, general conditions and home office overhead of the Contractor. The Lump Sum Price also includes all allowances specified in the Contract Documents.

Section 4.02. Payment Procedures. As Work proceeds under the Agreement, payments ("Progress Payments") shall be made by the Owner to the Contractor in accordance with the following procedure:

(a) By the 1st day of each calendar month during the performance of the Work, the Contractor shall submit to the Owner an Application and Certificate for Payment, based on the Work completed during the previous month ("previous month" being defined for this Section only as the second calendar day of the prior month through the first calendar day of the current month), using a form approved by the Owner. Contractor shall not be paid any amounts exceeding the Lump Sum Price set forth in Section 4.01 of this Contract, unless modified by a properly executed written Contract Amendment in accordance with the provisions of Article 9 of this Contract.

(b) Each Application and Certificate for Payment shall be accompanied by: (1) lien waivers of the Contractor conditioned upon payment by the Owner of the amount sought in the Application; (2) other documentation as may be requested by the Owner for the proper review of the Application and Certificate for Payment; (3) a list of current subcontractors, sub-subcontractors and material suppliers; (4) the Business Diversity Monthly Compliance Reports; and (5) all documents required by the Owner Controlled Insurance Program ("OCIP") Manual, as applicable.

(c) The Owner or Engineer shall promptly review each Application and Certificate for Payment and recommend for approval such amount as is properly due under the Contract Documents.

(d) Payments by the Owner shall be made within thirty (30) days from the date on which an Application and Certificate for Payment has been submitted and approved by the Owner or the next working day if the thirtieth day is a Saturday, Sunday or holiday.

Section 4.03. Mobilization. The work, which is conducted in preparation for the construction activities, which includes but is not limited to, movement of personnel, equipment, stockpiles, supplies to the project site, (all as more particularly described in Article 3.01 of Section 01100 of the Specifications) shall be designated as "Mobilization." The Mobilization lump sum amount for this Contract shall be **Seventy Thousand and 00/100 Dollars (\$70,000.00)** which is a fixed amount that shall not change for the Term of the Contract.

Section 4.04. Demobilization. The activities which are conducted by the Contractor in order to complete the work and conduct any closeout items, which includes but is not limited to, removal of personnel, equipment, Contractor owned stockpiles, supplies and incidentals from the project site, (all as more particularly described in Article 3.01 of Section 01100 of the Specifications) shall be designated as "Demobilization." The Demobilization lump sum amount for this Agreement shall be **Forty-Two Thousand and 00/100 Dollars (\$42,000.00)**, which is a fixed amount and shall not change for the Term of the Contract.

Section 4.05. Payment for Material Stored On-Site.

(a) Payment for the actual unit cost of materials suitably stored on the site of the Work ("Work Site") and intended for incorporation in the Work will be made by the Owner to the Contractor subject to the provisions of Section 4.02 of this Contract, Section 90-07 of the FAA General Provisions, and the following conditions:

- (1) The Contractor shall furnish supporting evidence satisfactory to the Owner evidencing the cost of the materials and shipment to the Work Site.
- (2) The materials shall not be stored on the Work Site for more than ninety (90) calendar days before they are installed without the written consent of the Owner.

- (3) The materials shall be stored on the Work Site in accordance with applicable recommendations of the manufacturer and the instructions of the Owner.
- (4) A representative of the Owner or Engineer may inspect and inventory any stored materials.

(b) Payment will not be made for materials stored away from the Work Site without the written consent of Owner. In the event that the Owner consents to payment for materials stored off-site, such payment shall be conditioned upon submission by the Contractor of bills of sale or such other documentation satisfactory to the Owner to establish the title of the Owner to such materials or equipment, and the submission of satisfactory insurance certificates for the stored materials.

(c) Notwithstanding any provision herein to the contrary, if payments are to be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the Work Site, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other documentation satisfactory to the Owner to establish the title of the Owner to such materials or equipment, and the submission of satisfactory insurance certificates for the stored materials to protect the interest of the Owner.

(d) Regardless of ownership or insurance, the Contractor shall remain the guardian and protector of all materials and equipment stored or incorporated into the Work.

Section 4.06. Use of Payments. The Contractor shall use all sums paid to it pursuant to this Contract for the performance of the Work in accordance with the Contract Documents. Upon the request of the Owner or Engineer, the Contractor shall furnish satisfactory proof of payment, including, but not limited to, partial release of liens and the Business Diversity Monthly Compliance Report, as to the disposition of any monies paid to the Contractor by the Owner.

Section 4.07. Payment Not a Waiver. Neither the approval or making of any payment to the Contractor, nor the partial or entire use or occupancy of the Work by the Owner, shall be deemed an acceptance of any portion of the Work.

Section 4.08. Final Payment.

(a) "Final Payment," by the Owner shall constitute a waiver of all claims by the Owner for performance of the Work except for claims of the Owner arising from unsettled liens, incomplete or defective workmanship, defective materials, failure to perform in accordance with the progress schedule, or for the breach of any guarantees of warranties provided or to be provided by the Contractor under this Contract. Acceptance of the Final Payment by the Contractor shall constitute a waiver and release of any and all claims which the Contractor may then have or in the future have against the Owner or the Engineer arising from the Work or this Contract.

(b) Final Acceptance of the Work shall occur only after all Work (including punch list items) provided for in the Contract Documents has been finally completed and accepted in writing by the Owner, and only after the Contractor has provided the Owner with instructions and operating manuals, parts lists, "record" drawings and all other items required by the Contract Documents.

(c) Within thirty (30) days after "Final Acceptance" of the Work, the Final Payment of amounts found properly due under the Contract Documents shall be paid to the Contractor.

(d) Final Payment shall not become due until the Contractor submits to the Owner the following:

- (1) An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or its property might in any way be responsible, have been paid or otherwise satisfied; and
- (2) A consent of surety to Final Payment; and
- (3) Other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Work, to the extent and in such form as may be designated by the Owner or Engineer; and
- (4) Any documents required by Article 6 of this Contract.

(e) The Owner shall issue a "Certificate of Final Completion" when, in its sole discretion, the Project has been completed and all conditions required by this Section 4.07 have been complied with by Contractor.

Section 4.09. The Right of Owner to Withhold Payment. The Owner may withhold or, on account of subsequent evidence, nullify, the whole or part of any Progress Payment, including the Final Payment, to such extent as may be necessary to reasonably protect itself from any of the following:

- (a) unacceptable work as further described in Section 50-10 of the FAA General Provisions; or
- (b) third-party claims filed or reasonable evidence indicating probable filing of such claims; or
- (c) reasonable doubt that the Work will be substantially completed by the Substantial Completion Date; or
- (d) failure of the Contractor to make payments properly to subcontractors or for equipment, materials, services, or labor; or
- (e) reasonable evidence of fraud, over-billing or overpayment; or
- (f) failure of the Contractor to perform the Work in accordance with the Contract Documents; or
- (g) a reasonable doubt that the Work can be completed for the unpaid balance of the Lump Sum Price; or
- (h) damage to the Owner, or to another contractor, subcontractor or sub-subcontractor caused by the Contractor; or
- (i) failure to provide certified payroll records; or
- (j) failure to provide any documents required by the Owner Controlled Insurance Program (OCIP); or
- (k) failure to keep the record drawings current each month in accordance with Article 6 of this Contract.

ARTICLE 5

EQUIPMENT AND MATERIALS

Section 5.01. Materials Provided by Contractor.

(a) Unless otherwise provided in the Contract Documents, the Contractor shall provide all equipment, materials, labor, services, water, and power to the Work Site, as well as all tools, equipment, lights, transportation, and other facilities necessary for the performance of the Work.

(b) All equipment, machinery, material, and articles incorporated in the Work shall be new and unused unless otherwise specified in the Contract Documents. When not specified in detail in the Contract Documents, the equipment, machinery, material, and articles incorporated in the Work shall be of the most suitable grade and quality for the purpose intended.

Section 5.02. Type of Equipment Used.

(a) When any equipment, machinery, material, or article is referred to by trade name, make, or catalog number followed by the words "or equal," the reference shall be regarded as establishing the minimum standard of quality and performance required and shall not be construed as limiting competition. The Contractor may, with the prior written approval of the Owner, use other equipment, machinery, materials, or articles which are at least equal in quality and performance to that named in the Contract Documents; provided, however, that in no event shall such approval be construed as a waiver of the right of the Owner to require equipment, machinery, materials, or articles which conform to the standard of quality and performance established by reference to the trade name, make, or catalog number of the equipment, machinery, materials, or articles for which the substitution has been approved. Any cost of redesign and additional expense resulting from the substitution shall be at the sole expense of the Contractor.

(b) The name of the manufacturer, model number, and other identifying information respecting the performance, capacity, nature, and rating of equipment, machinery, materials, and articles proposed in substitution of those specified in the Contract Documents shall be submitted to the Owner in sufficient time to avoid delays in the Work.

Section 5.03. Non-Conforming Materials.

(a) Equipment, machinery, materials or articles installed or used in the Work which do not comply with the requirements of the Contract Documents, and which have not been previously approved in writing by the Owner shall be installed or used at the risk of the Contractor of subsequent rejection by the Owner.

(b) The Contractor shall be fully and solely responsible for quality control for all equipment, machinery, materials, or articles used in the performance of the Work.

Section 5.04. Owner Furnishing Equipment or Fixtures. The Owner may directly furnish any and all of the equipment or fixtures required for the Project. In the event the Owner elects to do so, the Lump Sum Price shall be reduced by the amount which was to be charged by Contractor for such equipment or fixtures as set forth and included in the Contract Documents. A Contract Amendment reducing the Lump Sum Price for that item of Work shall be executed by Owner and Contractor to reflect a reduction in the Lump Sum Price for that item of Work and that the Owner is to furnish the equipment or fixtures. The Contractor shall assume responsibility for and be fully responsible for the care, custody, and control of all Owner furnished equipment or fixtures after said equipment or fixtures arrives on the Work Site or in any approved offsite storage facility, as set forth in Section 60-08 of the FAA's General Provisions.

ARTICLE 6

RECORD DRAWINGS AND DATA

Section 6.01. Record Drawings. A complete set of drawings shall be maintained by the Contractor at the Work Site for the purpose of accurately indicating all record conditions. The drawings shall be kept up-to-date and marked each day to show all changes and variations and each entry shall be dated and verified as made. At the completion of the Work and prior to Final Payment, a complete set of marked record drawings shall be furnished by the Contractor to the Owner. If the record drawings are not kept current each month, the Owner shall have no obligation to pay the Contractor until the record drawings are made current.

Section 6.02. Operation and Maintenance Data.

(a) The Contractor shall furnish complete and necessary data for the operation, repair, and maintenance of each operating component of the Work (hereinafter referred to as "the Data"). The Data shall include prints of shop drawings, "as-installed" conditions, sources of equipment and principal materials, specified tests and performance data, repair and maintenance data, lubrication instructions and recommendations, parts lists, and other catalog data or information required to operate and maintain any part of the Work. Care shall be taken to include all pertinent data and to exclude inapplicable or duplicative information.

(b) Prior to Final Payment, a set of Data shall be furnished to the Owner in an electronic PDF format. In addition, three (3) complete sets of the Data in a form directed by the Owner shall be provided to the Owner, indexed alphabetically by components, grouped together and securely bound in a durable folder or binder that is labeled and indexed to show its contents.

(c) Installation information for all machinery and equipment also shall be kept on the site of the Work during construction but used or marked prints or data sheets are not to be used in assembling the final maintenance and operating manuals described in paragraph (b) of this Section 6.02.

(d) Operations and maintenance demonstrations by the manufacturer of all machinery and equipment shall be complete in all respects and shall specify the appropriate and inappropriate uses of the machinery and equipment.

Section 6.03. Information from Suppliers. The Contractor shall make it a requirement or condition of purchase from its suppliers of equipment and/or materials: (1) to furnish complete and adequate operating and maintenance data pertaining to their equipment and/or materials; (2) to assign to the Owner any warranty, express or implied, furnished by the manufacturer of the equipment and/or materials; and, (3) to assign to the Owner any customary maintenance or repair

service, spare parts supply service, or personnel support service furnished by the manufacturer of the equipment and/or materials. If the terms and conditions of any warranty, maintenance or repair service, spare parts supply service, or personnel support service furnished by manufacturer of the equipment and/or materials are negotiable, they shall be negotiated by the Owner and the manufacturer.

ARTICLE 7

SUBCONTRACTS

Section 7.01. Definition.

(a) As used in the Contract Documents, a “subcontractor” is a person or organization that has a contract with the Contractor to perform any portion of the Work or to furnish any equipment or materials to the Project.

(b) As used in the Contract Documents, a “sub-subcontractor” is a person or organization that has a contract with a subcontractor to perform any portion of the Work or to furnish any equipment or materials to the Project.

Section 7.02. No Contractual Relationship with Owner. Nothing contained in the Contract Documents or otherwise shall create any contractual relationship between the Owner and any subcontractor or sub-subcontractor, and no subcontract or sub-subcontract shall relieve the Contractor of its responsibilities and obligations should any subcontractor or sub-subcontractor fail to perform its work in a satisfactory manner. The Contractor agrees to be as fully responsible to the Owner for the acts and omissions of its subcontractors and their sub-subcontractors and of persons either directly or indirectly employed by them as it is for the acts and omissions of persons directly employed by Contractor.

Section 7.03. Award of Subcontracts.

(a) Unless the Owner gives its written approval to Contractor, the Contractor shall not enter into a subcontract or purchase order with any entity that is a party in any litigation, arbitration, or other dispute resolution proceeding with the Owner. The Contractor shall request written confirmation from any potential subcontractor or supplier prior to the execution of any subcontract or purchase order that there is no pending litigation, arbitration, or other dispute resolution proceeding where the Owner and the potential subcontractor or supplier are parties. Such written confirmation shall be sent to the Owner within seven (7) days from the receipt of bids.

(b) If the Owner refuses to accept any subcontractor or material supplier (or sub-subcontractor) or person or organization because of such pending litigation, arbitration, or other dispute resolution proceeding, the Contractor shall submit an acceptable substitute at no additional cost to Owner.

Section 7.04. Change of Subcontractors. The Owner may require a change of any subcontractor. The Lump Sum Price shall be adjusted accordingly due to the Owner’s requiring a change of any subcontractor, sub-subcontractor, or material supplier previously approved in writing by the Owner, unless the change was required because the subcontractor, sub-subcontractor or material supplier was unable to timely or properly perform its work in accordance with the Contract Documents.

Section 7.05. No Substitution of Subcontractors. The Contractor shall not make any substitution for any subcontractor nor allow the substitution of any sub-subcontractor who has been accepted by the Owner unless the substitution is required and previously approved by the Owner. Acceptable reasons for substitution (other than where required by the Owner) shall be limited to the following:

- (a) Inability of the subcontractor or sub-subcontractor to provide bonds, if required; or
- (b) Failure of the subcontractor or sub-subcontractor to perform according to approved schedules or other provisions of the Contract Documents; or
- (c) Other reasons which would reasonably render the subcontractor or sub-subcontractor unable to perform its work according to the Contract Documents as evidenced in writing by the Contractor.

Section 7.06. Subcontract Terms. All portions of the Work performed by a subcontractor or sub-subcontractor shall be pursuant to an appropriate agreement between the Contractor and the subcontractor (and where appropriate between subcontractors and sub-subcontractors) which shall contain provisions that:

- (a) Preserve and protect the rights of the Owner under the Contract Documents, including, but not limited to, the obligation to indemnify the Owner as set forth in Article 21 of this Contract with respect to the portion of the Work to be performed under the subcontract (or sub-subcontract) so that the subcontracting will not prejudice such rights; and
- (b) Require that such Work be performed in accordance with the requirements of the Contract Documents; and
- (c) Require submission to the Contractor of applications for payment under each subcontract to which the Contractor is a party; and
- (d) Require that all requests for additional compensation, extensions of time or otherwise with respect to subcontracted portions of the Work be submitted to the Contractor (via any subcontractor or sub-subcontractor where appropriate) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like requests by the Contractor upon the Owner; and
- (e) Name the Owner as an additional insured under all applicable insurance policies; and
- (f) Require compliance with the federal Disadvantaged Business Enterprise (“DBE”) requirements, including, but not limited to, non-discrimination and prompt pay provision.

Section 7.07. Subcontractor Relations Requirements. By appropriate written agreement, the Contractor shall require each subcontractor, to the extent of the Work to be performed by the subcontractor, to be bound by the obligations, terms and conditions of this Contract and the Contract Documents, and to assume toward the Contractor all the obligations, terms, conditions and responsibilities which the Contractor, by this Contract and the Contract Documents, assumes toward the Owner and the Engineer. Each subcontract agreement shall preserve and protect the rights of the Owner and the Engineer under this Contract and the Contract Documents with respect to the Work to be performed by the subcontractor so that subcontracting thereof will not prejudice the rights of the Owner or the Engineer. The Contractor shall require each subcontractor to enter into similar agreement with sub-subcontractors. The Contractor shall make available to each proposed subcontractor, prior to the execution of the subcontract agreement, copies of this Contract and the Contract Documents to which the subcontractor will be bound. Subcontracts shall similarly make copies of this Contract and the Contract Documents available to their respective proposed sub-subcontractors.

ARTICLE 8

PAYMENT TO SUBCONTRACTORS

Section 8.01. Payments to Subcontractors from the Contractor. The Contractor shall pay each subcontractor an amount equal to the percentage of completion allowed to the Contractor on account of the work of each subcontractor. The Contractor shall also require each subcontractor to make similar payments to its sub-subcontractors.

Section 8.02. Withholding of Payment by the Owner. If the Owner withholds monies for any cause which is the fault of the Contractor and/or the fault of a particular subcontractor, the Contractor shall pay all other subcontractors, in accordance with the terms of their applicable subcontract, if not in conflict with this Contract and applicable law, any time after the progress payment by the Owner should otherwise have been issued, for its Work to the extent completed. Notwithstanding this Section 8.02, Contractor may withhold funds from any subcontractor that is not performing its work in accordance with the Contract Documents.

Section 8.03. Independent Obligation to Pay. The obligation of the Contractor to pay its subcontractors (and their obligation to pay sub-subcontractors) is an independent obligation from the obligation of the Owner to make payment to the Contractor. The Owner shall have no obligation to pay or to see to the payment of any monies to any subcontractor or sub-subcontractor. The provisions of this Contract are solely intended for the benefit of the Owner and Contractor and not for any other person. Nothing in this Contract is intended to create any third-party rights against the Owner.

Section 8.04. Payments to Sub-Subcontractors. This Contract is governed by federal prompt pay provisions

where applicable and as set forth in Exhibit "E" to this Contract. To the extent that Tennessee statutes are not superseded by applicable federal statutes in this area, state statutes also will apply. Contractor agrees to require each of its subcontractors (1) to pay their subcontractors for invoices submitted or normal progress payments for work completed satisfactorily pursuant to its contract with each subcontractor and (2) to make such payments to their respective subcontractors no later than ten (10) days after any such subcontractors receive payment from the prime contractor or their respective subcontractor, as applicable.

ARTICLE 9

CHANGES

Section 9.01. Changes in the Work.

(a) The Owner, without invalidating this Contract, may order extra work or make changes by altering, adding to or deducting from the Work by executing a Contract Amendment or a Construction Change Directive in a form provided by the Owner or Engineer. All Work performed pursuant to a valid Contract Amendment, or a Construction Change Directive shall be performed under the conditions of this Contract and the Contract Documents.

(b) The Owner shall have authority to make changes in the Work not involving extra cost, not involving an extension to the Substantial Completion Date, and not inconsistent with the purposes of the Work, but otherwise, no extra Work or change in the Work shall be made unless pursuant to a Contract Amendment or a Construction Change Directive and no claim by Contractor for additional cost or fee or any extension of the Substantial Completion Date shall be valid unless so ordered in a written Contract Amendment or a Construction Change Directive.

(c) Engineer's Supplemental Instructions (ESI) are written instruments prepared by the Owner or Engineer to issue additional instructions or interpretations or to order changes in the Work not involving extra costs or fees, or any extension of the scheduled Substantial Completion Date. Contractor shall give prompt written notice to Owner if it believes that the contents of an ESI require extra costs or fees or affect the Substantial Completion Date.

Section 9.02. Construction Change Directive.

(a) A Construction Change Directive is a written order prepared by the Owner, Program Manager, or Engineer and signed by the Owner, Engineer or Program Manager directing a change in the Work and stating a proposed basis for adjustment, if any, in the Lump Sum Price or the Substantial Completion Date, or both. The Owner may, by Construction Change Directive, without invalidating this Contract, order changes in the Work consisting of additions, deletions, or other revisions.

(b) A Construction Change Directive shall be used in the absence of an agreement on the terms of a Contract Amendment.

(c) If the Construction Change Directive provides for an adjustment to the Lump Sum Price, the adjustment shall be based on one of the following methods:

- (1) Mutual acceptance of a lump sum properly itemized and supported by sufficient documentation to permit evaluation; or
- (2) Unit prices stated in the Contract Documents or subsequently agreed upon; or
- (3) Cost to be determined in a manner agreed upon by the Parties and a mutually acceptable fixed or percentage fee; or
- (4) As provided in paragraph (f) of this Section 9.02.

(d) Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Lump Sum Price or the Substantial Completion Date.

(e) A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in the Lump Sum Price, the Substantial Completion Date or the method of determining the adjustment. Such agreement shall be effective immediately and shall be recorded as a Contract Amendment.

(f) If the Contractor does not respond promptly or disagrees with the method for adjustment in the Lump Sum Price, the method and the adjustment shall be determined by the Owner on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Lump Sum Price, a reasonable allowance for overhead and profit. In such case, the Contractor shall keep and present, in such form as the Owner may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purpose of this paragraph shall be limited to the following:

- (1) The actual cost for labor, including social security and unemployment insurance, fringe benefits required by agreement, and workers' or workmen's compensation insurance; and/or
- (2) The actual cost of materials, supplies, machinery, and equipment, including cost of transportation, whether incorporated or consumed; and/or
- (3) The actual cost of subcontractors and sub-subcontractors; and/or
- (4) The actual cost of premiums for all bonds and insurance, permit fees and sales, use or similar taxes related to the Work; and/or
- (5) The actual additional costs of supervision and field office personnel, if any, directly attributable to the change.

(g) Pending final determination of cost to the Owner, amounts not in dispute may be included in Certificates and Applications for Payment. The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Lump Sum Price shall be actual net cost, as confirmed by the Owner. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be calculated on the basis of net increase, if any, with respect to that change.

Section 9.03. Contract Amendment Procedure. If the Owner desires extra Work or changes in the Work, the Owner shall submit a Request for Proposal ("RFP") to the Contractor. The Contractor shall furnish to the Owner a statement setting forth in detail the proposal of the Contractor for performing the extra Work or changes and the effect of the extra Work or changes, if any, in the Lump Sum Price and the Substantial Completion Date attributable to the extra Work or changes set forth in the request of the Owner. If the Owner approves in writing the proposal of the Contractor, a Contract Amendment in the form provided by the Owner shall be executed by the Parties and the Lump Sum Price and the Substantial Completion Date shall be adjusted accordingly. In preparing Lump Sum quotes in response to an RFP, the Contractor shall prepare a cost breakdown that provides sufficient detail for the Owner or Engineer to determine that the quoted costs are reasonable and allowable and to verify that markups are properly calculated according to the terms of this Contract.

Section 9.04. Changes in the Lump Sum Price. Any increase or decrease in the Lump Sum Price attributable to a Contract Amendment performed by the Contractor or any of its subcontractors shall be governed by the provisions of Section 90-05 of the FAA's General Provisions.

Section 9.05. Time and Materials. In the event that the Owner and the Contractor cannot agree on the amount or time extension, if any due, to the Contractor for a Contract Amendment, the Owner may, in writing, direct the Contractor to proceed with the performance of such Work. The Contractor agrees to comply with any such directive issued by the Owner. If any additional compensation is due to the Contractor as a result of a directive, it will be calculated pursuant to the provisions of Section 150-90 of the FAA General Provisions Addendum.

Section 9.06. Unconditional Obligation to Proceed. Notwithstanding anything herein to the contrary, the Contractor will proceed with the Work so as to complete the Work on or before the Substantial Completion Date even if it has a dispute with the Owner concerning a Construction Contract Amendment, a Construction Change Directive or any extension of time which is or could be due to the Contractor pursuant to a Contract Amendment, a Construction Change Directive or otherwise.

Section 9.07. Request for Additional Compensation. If for any reason the Contractor believes that additional compensation is due for work not clearly provided for in the Contract Documents, the Contractor shall provide written notice to the Owner at least three (3) days before beginning the work which is not clearly provided for in the Contract Documents. If such notification is not given, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor shall not in any way be construed as proving or substantiating the validity of the request for additional compensation. When the work, which is the basis for the Contractor's request for additional compensation, has been completed, the Contractor shall, within ten (10) calendar days, submit evidence of costs incurred by the Contractor and a narrative which provides the basis for the request for additional compensation.

ARTICLE 10

THE UNDERSTANDING OF THE CONTRACTOR

Section 10.01. Examination of Work Site. The Contractor acknowledges that it has, by careful examination, satisfied itself as to the nature and location of the Work, the conformation of the ground conditions, the character, quality and quantity of the materials, equipment, supplies, machinery, and facilities needed preliminary to and during the performance of the Work, the general and local conditions, and all other matters which can in any way affect the Work.

Section 10.02. Sufficiency of Contract Documents and Representations of Contractor.

(a) The Contractor acknowledges that the Contract Documents are sufficient to enable it to determine the cost of all of the Work and that the Work can be completed in accordance with the Contract Documents for the Lump Sum Price.

(b) The Contractor acknowledges that any observed errors, discrepancies, omissions, ambiguities, or conflicts in the Contract Documents will be brought to the attention of the Owner, as set forth in Section 2.04 of this Contract, and in a timely manner in order to ensure substantial completion of the Work by the Substantial Completion Date. The Contractor shall be responsible for using its best efforts to discover and observe errors, discrepancies, omissions, ambiguities, or conflicts in the Contract Documents. In addition, the Contractor acknowledges that the Owner has not made nor shall it be deemed to have made any warranties, guarantees, or representations of any kind whatsoever regarding the sufficiency of the Contract Documents or any conditions relating to the Work.

(c) Contractor represents that it has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing underground use facilities at or contiguous to the Work Site and, subject to the provisions of Section 10.03 of this Contract, assumes responsibility for the accurate location of said underground use facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said underground use facilities are or will be required by Contractor in order to perform and furnish the Work for the Lump Sum Price and substantially complete the Work by the Substantial Completion Date. However, notwithstanding anything herein to the contrary, the Contractor may, at its sole expense after receiving written permission from the Owner, and subject to any limitations specified by the Owner or Engineer, conduct any additional testing it deems necessary.

Section 10.03. Differing Work Site Conditions. If conditions are encountered at the Work Site that are: (1) subsurface physical conditions, which differ materially from those indicated in the Contract Documents; or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing Party shall be given to the other Party promptly before conditions are disturbed and in no event later than seven (7) days after the first observance of the conditions. The Owner or Engineer will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost, or time required, for performance of any part of the Work; will recommend an equitable adjustment in the Lump Sum Price or the Substantial Completion Date, or both. However, any equitable adjustment in the Lump Sum Price shall not include additional general conditions costs. If the Owner determines that the conditions at the Work Site are not materially different from those indicated in the Contract Documents and that no change in the terms of this Contract is justified, the Owner shall so notify the Contractor in writing, stating the reasons. Claims by either Party in opposition to such determination must be made within fourteen (14) days after the Owner has given notice of the decision.

Section 10.04. No Oral Modification. No oral agreement or conversation with any officer, agent or employee of the Owner or its representatives, including the Engineer, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations contained in this Contract or the Contract Documents.

ARTICLE 11

SUPERVISION OF THE WORK; SAFETY AND SECURITY

Section 11.01. The Superintendent of the Contractor. The Contractor shall designate in writing to the Owner and keep on the Project during its progress a competent employee who has responsibility to oversee the Work ("Superintendent"). The Superintendent shall be satisfactory to the Owner. The Superintendent shall be changed upon written request of the Owner but shall not be changed by the Contractor except with the consent of the Owner, unless the Superintendent ceases to be in its employ. The Superintendent shall represent the Contractor, and all directions given to him by the Owner shall be as binding as if given to the Contractor directly. The Superintendent shall devote his full time to the Work and shall maintain an office on the Work Site. The Superintendent shall direct, coordinate and supervise all Work, inspect all materials delivered to the Work Site to ascertain whether or not they comply with the requirements of the Contract Documents, and reject all non-conforming materials or workmanship.

Section 11.02. Order and Discipline. The Contractor shall at all times be responsible for enforcing strict discipline and good order among its employees, and all employees of its subcontractors and sub-subcontractors. If any person on the Work Site shall appear to be incompetent, disorderly, or intemperate, in any way disrupts or interferes with the Work, or is in any other manner not qualified for or unfaithful to the job entrusted to him, such person shall be discharged from the Project immediately and shall not again be employed on the Work Site without the prior written consent of the Owner.

Section 11.03. Cleaning Up.

(a) During the performance of the Work, the Contractor shall keep the Work Site clean and free of all rubbish, waste materials, debris and other materials in accordance with the instructions set forth in the Contract Documents. At the end of each working day, the Contractor shall remove all waste materials, rubbish, debris, and other materials from and about the Work Site as well as all surplus materials and shall leave the Work Site clean in accordance with the Contract Documents.

(b) The Contractor shall establish an active ongoing program to eliminate any foreign objects from the Work Site that may cause damage to aircraft or cause personal injury to other persons.

(c) The Contractor shall pay particular attention to haul routes used to and from the Work Site to prevent any construction debris from being dropped or tracked that may present a hazard.

(d) The Contractor, upon written notice from the Owner, shall promptly cut the grass and clean debris around the Work Site. If the Contractor fails to clean up any debris which is deposited as a result of construction operations, the Owner will, after notice, immediately do so. The cost thereof will be charged to the Contractor at actual cost per hour, but not less than the minimum rate of Two Hundred Fifty Dollars (\$250.00) per hour. The Contractor shall assume full responsibility for failure to perform cleanup operations required by this Section 11.03.

(e) All materials delivered to the Work Site shall be stored and handled so as to preclude inclusion of any foreign substances, and to prevent any discoloration or damage which might reduce its effectiveness as part of the Work.

Section 11.04. Safety and Security.

(a) The Contractor shall be solely responsible for and oversee all safety orders, precautions, and programs necessary for the safety of the Work. The Contractor shall take the precautions set forth in the Contract Documents in order to ensure the safety of all persons involved in the Work, all other persons whom the Work might affect, all equipment and materials incorporated in the Work, all property on the Work Site and adjacent to it, and the Owner's business operations which are functioning on the Work Site or in the vicinity of it.

(b) The Contractor shall keep an accurate record of all persons who are on the Work Site and shall provide a copy of such list to the Owner with each monthly Application and Certificate for Payment. The Contractor, its subcontractors, their sub-subcontractors, and all employees of same, shall comply with all security rules made by the Owner and the Federal Aviation Administration. In addition, Contractor shall comply with the construction safety and health guidelines which are set forth in Exhibit D.

(c) The Contractor shall conform to Owner's rules and regulations for airport operations.

(d) Prior to the commencement of the Work, the Contractor shall provide to the Owner a list of all of its employees who will perform any portion of the Work.

Section 11.05. Observation of the Work.

(a) The Engineer, the Owner and persons designated by the Owner, shall at all times have access to the Work Site whenever it is in preparation or progress and the Contractor shall provide proper facilities for such access and for observation. If the Owner or the Engineer discovers any defective Work in connection with any observation, it shall be reported to the Contractor in writing and the Contractor shall correct it.

(b) If the Contract Documents, the written instructions of the Owner, laws, ordinances, rules or regulations, or any public authority require any of the Work to be specifically tested or inspected, the Contractor shall give the Owner timely notice of its readiness for inspection and testing, and of the date set for such test or inspection. Inspections by the Owner or Engineer shall be promptly made. If any of the Work should be covered up without the approval or consent of the Owner, the Engineer or any public authority, it shall be uncovered for examination, if required by the Owner, the Engineer, or such other public authority, at the sole expense of the Contractor.

(c) Re-examination of questioned Work that has been previously tested or inspected by the Engineer or the Owner may be ordered by the Engineer or the Owner and, if so ordered, the questioned Work shall be uncovered by the Contractor. If such Work is found to be in compliance with the Contract Documents, the Owner shall pay the actual cost of the re-examination. If such Work is found not to be in compliance with the Contract Documents, the Contractor shall bear the costs of the re-examination.

(d) The Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, then the Contractor shall promptly and at its expense secure such services. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, shop drawings and other submittals prepared by such professional. Shop drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Owner or Engineer. The Owner and the Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals.

ARTICLE 12

PERMITS, LICENSES, LAWS AND REGULATIONS

Section 12.01. Contractor to Secure All Permits. The Contractor shall secure and pay for all construction related permits, including the building permit. The Contractor shall be responsible for all inspections required by governmental authorities in conjunction with the issuance of said permits. Contractor shall secure and pay for all governmental fees, licenses and other permits necessary for the lawful and proper execution and completion of the Work.

Section 12.02. Compliance with Laws. The Contractor shall give all notices and shall comply with all laws, ordinances, rules, regulations, and orders of any public authority having jurisdiction over the Work, which have any bearing on the execution of the Work. If the Contractor observes that any of the Contract Documents are at variance in any respect with any such laws, ordinances, rules, regulations, and orders, it shall promptly notify the Owner and the Engineer in writing and any necessary changes shall be made by the Contractor. If the Contractor fails to give such notice or executes any of the Work in a manner contrary to any such laws, ordinances, rules, regulations or orders, the Contractor shall bear all resulting costs to correct said Work to comply with such laws and regulations and be liable for any resulting fines, penalties, judgments or damages imposed on or incurred by the Owner.

ARTICLE 13

TAXES AND OTHER FEES AND COSTS

Section 13.01. Payment of Taxes by Contractor.

(a) Any and all taxes, excises, duties, and assessments in any manner levied, assessed or imposed by any government or subdivision or agency having jurisdiction over the Work shall be the sole responsibility and liability of the Contractor.

(b) The Contractor shall promptly pay and discharge when due, unless the validity or application is being contested by the Contractor in good faith, any and all taxes, excises, duties and assessments, together with any interest and penalties, if any, the responsibility and liability for which the Contractor has assumed pursuant to the provisions of paragraph (a) of this Section 13.01, unless any such tax, excise, duty or assessment is levied, assessed or imposed upon the Owner, in which case the Owner shall promptly give the Contractor notice of such levy, assessment or imposition, whereupon the Contractor shall promptly pay and discharge the same. Upon the written request and at the sole expense of the Contractor, the Owner shall assist the Contractor in contesting the validity or application of any such levy, assessment or imposition, and in the event a refund of all or any part of any tax, excise, duty or assessment (including interest and penalties, if any), said refund shall be refunded to the Contractor (less the amount of expenses associated with such contest not previously reimbursed by the Contractor to the Owner).

(c) The Contractor shall pay all applicable fees, and for all damage to sidewalks, streets, Owner's property, and other public property or to any public utilities caused by the performance of this Contract.

Section 13.02. Damage to Owner Property. Contractor agrees to promptly notify Owner of any damage caused to Airport property arising from Contractor's activities at the Airport. Contractor also agrees to comply with any request made by the Owner for reimbursement of costs associated with any damage to Airport property arising from work performed at the Airport by Contractor or any of Contractor's representatives, managers, employees, agents, contractors, subcontractors, licensees or invitees or from the conduct of same. This provision shall survive the termination of this Contract.

ARTICLE 14

SHOP DRAWINGS AND SAMPLES; MATERIAL TESTING

Section 14.01. Definitions.

(a) As used in this Contract, "shop drawings" are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor, any subcontractor, sub-subcontractor, manufacturer, supplier or distributor, and which illustrates some portion of the Work.

(b) As used in this Contract, "samples" are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship.

Section 14.02. Submissions.

(a) Contractor shall submit to Owner all shop drawings in electronic format or as hard copies in accordance with the specifications. Contractor shall review, stamp with its approval, and submit, in orderly sequence so as to cause no delay in the Work or the work of any other contractor, all shop drawings and samples required by the Contract Documents or subsequently by the Owner or Engineer. Shop drawings and samples shall be properly identified as specified in the Contract Documents or as the Engineer or Owner may require. At the time of submission, the Contractor shall inform the Engineer and the Owner by separate written correspondence of any deviation in the shop drawings or samples from the requirements of the Contract Documents.

(b) By approving and submitting shop drawings and samples, the Contractor represents that it has determined and verified all field measurements, field construction criteria, materials, catalogue numbers and other data, and that it has checked and coordinated each shop drawing and sample with the requirements of the Work and the Contract Documents.

Section 14.03. Review of the Engineer.

(a) The Engineer will review and act upon shop drawings and samples with reasonable promptness so as to cause no unreasonable delay in the Work, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. The review of the Engineer or its agents of a given item shall not indicate approval of an assembly in which the item functions.

(b) The approval of the Engineer of shop drawings or samples shall not relieve the Contractor of its responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Engineer and the Owner by separate written letter of such deviation at the time of submission and the Owner or Engineer has given written approval of the specific deviation, nor shall the approval of the Engineer relieve the Contractor from responsibility for errors or omissions in the shop drawings or samples.

Section 14.04. Corrections Made by Contractor. The Contractor shall make any corrections required by the Owner or Engineer and shall submit the required number of corrected copies of shop drawing or new samples until approved by Owner. The Contractor shall direct specific attention in writing or on resubmitted shop drawings or samples to revisions other than the corrections requested by the Engineer or the Owner on previous submissions.

Section 14.05. Prior Approval Required. No portion of the Work requiring a shop drawing or sample submission shall be commenced until the submission has been approved by the Owner or Engineer. All such portions of the Work shall be performed in accordance with approved shop drawings and samples and the Contract Documents.

Section 14.06. Submittal Schedule. Within seven (7) days after execution of this Contract, the Contractor shall provide the Owner and the Engineer with a preliminary submittal schedule of the dates that each shop drawing or sample will be submitted for approval. Within thirty (30) days after execution of this Contract, the Contractor shall provide the Engineer and the Owner with a final schedule of the dates that each shop drawing or sample will be submitted for approval. The sequence of the submittals of the Contractor shall be scheduled so as to permit an orderly review by the Engineer. The schedule shall allow reasonable added time according to the number or complexity of shop drawings or samples in each submittal for the checking, correction and rechecking of corrections, as well as for return of approved or rejected shop drawings and samples to the Contractor. The submittal schedules shall allow not less than fourteen (14) calendar days for the Engineer to review any shop drawing or sample.

Section 14.07. Material Testing.

(a) If the Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Owner timely notice of its readiness so the Owner or Engineer may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests or approvals required by public authorities. Unless otherwise provided, the Owner shall bear all costs of other inspection, tests or approvals.

(b) If the Owner or Engineer determines that any Work requires special inspection, testing or approval which paragraph (a) of this Section 14.07 does not include, the Owner or Engineer will instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as provided in paragraph (a) of this Section 14.07. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Owner's or Engineer's additional services made necessary by such failure; otherwise, the Owner shall bear such costs and an appropriate Contract Amendment shall be issued.

(c) Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered to the Owner.

(d) If the Owner or Engineer is to observe the inspections, tests or approvals required by the Contract Documents, they will do so promptly.

ARTICLE 15

THE RIGHT OF THE OWNER TO INSPECT AND AUDIT

Section 15.01. Right to Audit. The Contractor shall keep full and accurate records of all costs incurred and items billed in connection with any Work which records shall be open to audit by the Owner, or any authorized representative of the Owner, including but not limited to the Federal Aviation Administration and the Comptroller General of the United States during the course of the Project and until four (4) years after the final payment by the Owner to the Contractor. In addition, the Contractor shall make it a condition of all subcontracts and sub-subcontracts entered into in furtherance of the Work that any and all subcontractors and sub-subcontractors will keep accurate records of costs incurred and items billed in connection with the subcontract (or sub-subcontract) and that such records shall be open to audit by the Owner, or any authorized representative of the Owner, including but not limited to the Federal Aviation Administration and the Comptroller General of the United States during the course of the Work and until four (4) years after final payment by the Owner to the Contractor.

Section 15.02. Review of Subcontracts. Upon request of the Owner or Engineer, the Contractor shall provide the Owner with an executed copy of all subcontracts, sub-subcontracts and purchase orders entered into in furtherance of the Work.

ARTICLE 16

SEPARATE CONTRACTS

Section 16.01. The Right of the Owner to Award Separate Contracts. The Owner reserves the right to award other contracts in connection with work at or in the vicinity of the Work and the Contractor agrees to cooperate fully and not to unreasonably interfere with the work of such other contractors.

Section 16.02. Cooperation. The Contractor shall afford the other contractors of Owner the opportunity for the introduction and storage of their materials and equipment to their work sites and for the execution of their work. The Contractor shall properly connect and coordinate the Work with work of any other contractors of the Owner.

Section 16.03. Inspection of Work of Other Contractors. If any part of the Work depends, for proper execution or result upon, the work of another contractor of Owner, the Contractor shall inspect and promptly report to the Engineer and the Owner any discrepancies or defects in such work that render it unsuitable for such proper execution or results. Failure of the Contractor to so inspect and report shall constitute an acceptance of the Work of the other contractor as fit and proper to receive the Work.

Section 16.04. Responsibility for Damage. Should the Contractor cause damage to the work or property of any other contractor of the Owner, including, but not limited to, delay, disruption, suspension of work and/or acceleration damages, the Contractor shall settle all claims with such other contractor if the other contractor will so settle. If such other contractor sues the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall defend such proceedings at the expense of the Contractor, or provide counsel of Owner's choice for Owner at the expense of Contractor, and if any judgment or award against the Owner results, the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorney's fees and other litigation costs which the Owner has incurred.

ARTICLE 17

WARRANTIES OF THE CONTRACTOR

Section 17.01. Warranty of Title. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an Application and Certificate for Payment, whether incorporated in the Work or not, will pass to the Owner, free and clear of all liens, claims, security interests or encumbrances (hereinafter "Liens") and that none of the Work, materials or equipment covered by an Application and Certificate for Payment will have been acquired by the Contractor, or by any other person performing any part of the Work or furnishing materials and equipment for the Work, subject to an agreement under which a Lien is retained by the seller or supplier.

Section 17.02. Special Warranties. When special guarantees or warranties are required by the Contract Documents for specific parts of the Work, the Contractor shall procure certified copies of such guarantees or warranties,

countersign them and submit them to the Owner in triplicate. Delivery of such guarantees or warranties will not relieve the Contractor from any obligations assumed under any provision of this Contract or the Contract Documents.

Section 17.03. Assignment of Warranties. The Contractor hereby assigns to the Owner any and all existing assignable warranties, service life policies and patent indemnities of manufacturers of materials, equipment or items incorporated in the Work. Upon the request of the Owner or the Engineer, the Contractor shall give the Owner assistance in enforcing the rights of the Owner arising under such warranties, service life policies and patent indemnities. At the request of the Owner or the Engineer, the Contractor shall give notice (with copies to the Owner) to any such manufacturers of the assignment of such warranties, service life policies and patent indemnities.

Section 17.04. General Warranty and Correction of Work.

(a) In addition to any special guarantees or warranties contained in the Contract Documents, the Contractor warrants to the Owner that all materials and equipment furnished in performance of the Work will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards shall be considered defective.

(b) The Contractor shall promptly correct all defective Work to comply with the Contract Documents whether observed before or after the substantial completion date and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting defective Work.

(c) If, within one (1) year after the substantial completion date, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee or warranty required by the Contract Documents, any of the Work is found to be defective and not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner, or the Engineer, to do so.

(d) All defective or non-conforming Work shall be removed from the site of the Work if necessary, and the Work shall be corrected to comply with the Contract Documents without cost to the Owner. The Contractor also shall bear the cost of making good all work of other contractors destroyed or damaged by removal or correction of the defective Work of Contractor.

(e) If the Contractor fails to timely and properly correct defective Work, the Owner may correct it and hold the Contractor liable for all costs, expenses, and damages, including attorney's fees and litigation costs incurred by Owner in correcting it.

(f) In addition to the foregoing warranty, a warranty period of one (1) year shall apply under the same terms and conditions as the original warranty, to any work, supplied in correction of defective work under warranty pursuant to the provisions of this Section 17.04 and the Contractor shall assign to the Owner any warranties, including extended warranties, which are available in connection with the performance of such correction of defective Work. The warranty period shall commence on the date the Owner accepts the corrective Work of the Contractor.

ARTICLE 18

RIGHT OF THE OWNER TO DO WORK

Section 18.01. Right of the Owner to do Work. If the Contractor should neglect to perform the Work properly or fails to do anything required by the Contract Documents, and the Contractor does not correct the untimely or improper performance within seven (7) days after written demand is made, the Owner may, without prejudice to any other remedy it may have under this Contract or at law or in equity, make good any deficiencies in the Work, including, but not limited to, supplementing the workforces of the Contractor and deduct all costs of doing so from the payment then due or thereafter due the Contractor. The Owner shall not be required to give multiple notices to the Contractor in order to exercise its rights under this paragraph.

Section 18.02. Deduction for Uncorrected Work. If the Owner deems it inexpedient to correct deficiencies in the Work pursuant to Section 18.01 of this Contract, the Owner may deduct the reasonable cost of correcting the deficiencies, including any attorney's fees and additional fees and expenses of the Engineer, from the payment then due or thereafter due to the Contractor, but the making of such a deduction shall in no way be deemed an election of remedies by the Owner.

Section 18.03. Correction of Work before Final Payment.

(a) The Contractor shall promptly remove from the Work Site all materials, equipment or other items rejected by the Engineer or the Owner as failing to conform to the Contract Documents, whether incorporated in the Work or not, and the Contractor shall promptly replace and re-execute its original work to comply with the Contract Documents without expense to the Owner. In addition, the Contractor shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

(b) If the Contractor does not remove rejected material, equipment, or other items within a reasonable time (as fixed by written notice from the Owner, or the Engineer), the Engineer or the Owner may remove such items and store them at the expense of the Contractor, or dispose of such material, equipment or other items at the sole discretion of the Owner. If the Contractor does not pay the expense of such removal or storage within ten (10) days, the Owner may, upon ten (10) days written notice, sell such items at auction or at private sale and shall account for the net proceeds of such sale, after deducting all the costs and expenses of removal that should have been borne by the Contractor.

ARTICLE 19

INSURANCE

Section 19.01. Insurance Requirements. The Contractor shall fully comply with all requirements relating to insurance for the Project as set forth in this Article 19.

Section 19.02. Owner Controlled Insurance Program. The Owner has established an Owner Controlled Insurance Program (OCIP). To the extent required by the Owner, Contractor shall fully participate in and comply with all requirements of the OCIP. A copy of the OCIP Manual is attached hereto as Exhibit C and incorporated herein by reference. However, if the OCIP is not used, Contractor agrees to meet the requirements for Insurance coverage referenced in Section 19.03. A copy of the Construction Safety and Health Guidelines is attached hereto as Exhibit D and incorporated herein by reference.

Section 19.03. Contractor Provided Insurance Coverage. During the Term of this Agreement, Contractor shall comply with the insurance requirements set forth in Exhibit C ("Insurance Requirements").

Section 19.04. Survival. The insurance provisions of this Article 19 shall survive any termination of this Contract.

ARTICLE 20

SURETY BONDS

Section 20.01. Surety Bonds Required. The Contractor shall furnish and keep in force throughout the performance of the Work a separate performance bond and separate labor and material payment bond, each in the amount of the total of the Lump Sum Price (as the same may be modified from time to time) conditioned upon the faithful performance of the Work by the Contractor and payment of all obligations arising in connection with the Work by the Contractor. The bonds shall also guarantee to the Owner that the Work shall be free of all liens. The bonds shall name the Owner as obligee and shall be in such form and with such sureties as the Owner may approve prior to commencement of the Work.

ARTICLE 21

INDEMNIFICATION

Section 21.01. Indemnification of the Contractor.

(a) Without limiting any insurance required herein and to the fullest extent permitted by law, Contractor, on behalf of itself, its subcontractors, their agents, their employees or any entity or person for which the Contractor is or may be responsible (hereinafter collectively referred to as "Indemnitors"), shall fully defend, indemnify, save and hold the Owner, the Board of Commissioners of the Owner, the Program Manager, the Engineer, their agents, employees, officers, directors, partners and related entities (hereinafter collectively referred to as "Indemnitees") harmless from and against all liability,

damages, loss, claims, demands, actions and expenses of any nature whatsoever, including, but not limited to reasonable attorney's fees which arise out or are connected with: (1) any negligent act, error or omission by any Indemnitor, or (2) the failure of the Indemnitor to comply with any applicable laws, statutes, ordinances, rules or regulations of any governmental or quasi-governmental authority, or (3) the material breach of any term or condition of this Contract by any of the Indemnitors.

(b) Without limiting the generality of the foregoing, the indemnity set forth in this Article 21 shall include all liability, damages, loss, claims, demands, and actions on account of personal injury, death or property loss to any third party, any Indemnitees, any of the Indemnitees' employees, agents, licensees or invitees relating to the Project and which results from the negligent act, error or omission of Contractor.

(c) When the Contractor is obligated to provide the Owner a defense hereunder, it shall do so with qualified counsel that is selected by the Contractor and approved by the Owner. Such approval shall not be unreasonably withheld. In light of the Owner and Contractor's continuing relationship, however, the potential for conflicts of interests exists if the same counsel represents both the Owner and Contractor when the Contractor accepts the Owner's tender of defense under the indemnity provision of this Agreement. Therefore, the Owner retains the right to select its own counsel from a list of qualified attorneys provided by Contractor or Contractor's insurer. The selected counsel's fees and expenses shall be paid for by Contractor or its insurer, and the counsel shall be different from that selected by Contractor to represent it in the same matter.

(d) The indemnity set forth in this Article 21 shall survive any termination of this Contract.

Section 21.02. Labor Indemnity. The Contractor shall indemnify, defend and hold harmless the Owner, the Board of Commissioners of the Owner, the Program Manager, and the Engineer, their agents, employees, officers, directors, partners and related entities, from any and all administrative and judicial actions (including reasonable attorney's fees related to any such action), incurred by the Owner, the Program Manager, or the Engineer in connection with any labor related activity arising from the wrongful acts or omissions of the Contractor or its subcontractors in the performance of the Work of the Contractor. As used in this Contract, "labor related activity" includes, but is not limited to, strikes, walk-outs, informational or organizational picketing, use of placards, or distribution of hand-outs or leaflets at or in the vicinity of any facility where the Owner conducts business. The Owner shall advise the Contractor if any labor related activity occurs and the Contractor shall arrange for the legal representation necessary to protect the Owner, the Program Manager, and the Engineer provided such representation is previously approved by Owner.

Section 21.03. Royalties and Patents. The Contractor shall pay all royalties and license fees in anyway relating to the Work, shall defend all suits or claims for infringement of any patent or copyrights, and shall indemnify and hold the Owner, the Board of Commissioners of the Owner, their agents, officers, directors, partners and related entities, harmless from loss on account of such suit or claim.

Section 21.04. Attorney's Fees. In the event it becomes necessary for Owner to employ an attorney to enforce any provision of this Contract or to defend against any claim or litigation initiated by the Contractor, then the Contractor shall be liable for all attorney's fees and litigation expenses of Owner.

ARTICLE 22

RIGHT TO OCCUPY BY OWNER

Section 22.01. Early Occupancy by Owner. The Owner has the right to occupy or use ahead of schedule, at no additional cost nor obligation to Owner, all or any substantially completed or partially completed portion of the Work when such occupancy and use are in its best interest, notwithstanding the time of completion for all the Work. Maintenance of occupied portion will remain the Contractor's responsibility.

Section 22.02. Corrections after Occupancy. After the Owner has taken occupancy of all or any portion of the Work, the Contractor shall not disrupt the use and occupancy of the Owner to make corrections in the Work.

ARTICLE 23

DEFAULT: RIGHT TO TERMINATE BY OWNER

Section 23.01 Breach of Contract Terms. (Required by FAA) 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 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.

Section 23.02. Default and Termination by Owner. (Required by FAA)

(a) The Contractor shall be considered in default of his or her 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:

- (1) Fails to begin the Work under the Contract within the time specified in the Notice to Proceed, or
- (2) 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
- (3) 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
- (4) Discontinues the execution of the Work, or
- (5) Fails to resume Work which has been discontinued within a reasonable time after notice to do so, or
- (6) Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- (7) Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- (8) Makes an assignment for the benefit of creditors, or
- (9) For any other cause whatsoever, fails to carry on the Work in an acceptable manner.

Should the Engineer consider the Contractor in default of the Contract for any reason above, the Engineer 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.

(b) 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 Engineer 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 Engineer will be required for the completion of said Contract in an acceptable manner.

(c) 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.

Section 23.03. Termination for Convenience by Owner. (Required by FAA) The Owner may terminate this Contract without cause at any time by providing fifteen (15) days prior written notice to Contractor. 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:

- (a) Contractor must immediately discontinue work as specified in the written notice;
- (b) Terminate all subcontracts to the extent they relate to the work terminated under the notice;
- (c) Discontinue orders for materials and services except as directed by the written notice;
- (d) 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;
- (e) Complete performance of the Work not terminated by the notice; and
- (f) 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.

Section 23.04. Suspension by the Owner.

(a) The Owner may order the Contractor in writing to suspend, delay, or interrupt the Work in whole or in part for such period of time as the Owner may determine (hereinafter referred to as "Suspension").

(b) Provided the Suspension lasts for more than ninety (90) days, an adjustment to the Lump Sum Price ("Adjustment") shall be made as set forth in paragraph (c) of this Section 23.02. The Substantial Completion Date shall be extended by written Contract Amendment to the extent that substantial completion is actually delayed by this Suspension. No Adjustment shall be made to the extent:

- (1) That performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is in full or in part responsible; or
- (2) That an equitable adjustment is made or denied under another provision of this Contract.

(c) The amount of the Contractor's compensation for a Suspension pursuant to this Section 23.02 shall be limited to any properly documented costs of maintaining personnel and equipment in the field provided such costs are pre-approved by the Owner in writing. The Owner shall not be liable at any time for home office overhead or consequential damages. At

the Owner's option, the Contractor may be ordered to demobilize its forces because the Project is suspended. In such event, the Owner will reimburse the Contractor for the reasonable cost of demobilization and remobilization.

Section 23.05. Assignment of Subcontracts. In the event of termination by the Owner pursuant to this Article 23 or Exhibit E to this Contract, the Owner may require the Contractor to promptly assign to it all or some of the subcontracts, materials, tools, and equipment to be installed under this Contract, or rental agreements, and any other commitments which the Owner, in its sole discretion, chooses to take by assignment. In such event, the Contractor shall promptly execute and deliver to the Owner written assignments of such commitments.

ARTICLE 24

HAZARDOUS MATERIALS

Section 24.01. Hazardous Materials Covenants.

(a) Contractor hereby represents and warrants to and for the benefit of Owner that the Project or Work Site will not be used or operated in any manner that will result in the storage, use, treatment, manufacture, or disposal of any Hazardous Materials (hereinafter defined) upon the Project or Work Site or any portion thereof or which will result in Hazardous Materials Contamination (hereinafter defined). For purposes of this Article 24, the term "Hazardous Materials" shall mean and refer to: (1) any "hazardous waste" as defined by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901 *et seq.*), as amended from time to time, and regulations promulgated thereunder; (2) any "hazardous substance" as defined by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. § 9601 *et seq.*) ("CERCLA"), as amended from time to time, and regulations promulgated thereunder; (3) asbestos; (4) polychlorinated biphenyls; (5) urea formaldehyde; (6) any substance the presence of which on the premises is prohibited by any applicable environmental laws or regulations ("Laws") or by any other legal requirements affecting the Project or the Work Site; (7) petroleum based materials (with the exception of tires affixed to vehicles); and, (8) any other substance which is defined as hazardous, toxic, infectious or radioactive by any Laws or by any other legal requirements affecting the Project or Project site. For purposes of this Article 24, the term "Hazardous Materials Contamination" shall mean and refer to the contamination of the Project or Project site, soil, surface water, ground water, air, or other elements on, or of, the buildings, facilities, soil, surface water, ground water, air, or other elements on or of any other property as a result of Hazardous Materials at any time emanating from the Project or Work Site.

(b) In addition to and without limiting the generality of any other provision of this Contract, Contractor shall and hereby does indemnify and hold Owner, the Board of Commissioners of the Owner, the Program Manager, the Engineer, their agents, employees, officers, directors, partners and related entities harmless from and against any and all losses, damages, expenses, fees, claims, demands, causes of action, judgments, costs and liabilities, including, but not limited to, attorney's fees and costs of litigation, and costs and expenses of response, remedial and corrective work and other cleanup activities, arising out of or in any manner connected with: (1) the "release" or "threatened release" (as those terms are defined in CERCLA and the rules and regulations promulgated thereunder, as from time to time amended) by Contractor or Contractor's employees, agents, delegees, invitees, licensees, concessionaires, subcontractors or representatives, of any Hazardous Materials; or (2) any occurrence of Hazardous Materials Contamination affecting the Project or Work Site caused by or resulting from, in whole or in part, the operations of the Contractor or Contractor's employees, agents, delegees, invitees, licensees, concessionaires, subcontractors or representatives. The provisions of this paragraph shall survive any payment or satisfaction of this Contract and such provisions shall remain in full force and effect.

(c) When use or storage of hazardous materials or equipment or unusual methods of construction are necessary, the Contractor shall obtain prior written approval from the Owner. The use of explosives is strictly prohibited provided, however, powder activated fasteners are permitted.

(d) If Contractor encounters on the Work Site any substance or material reasonably believed by Contractor to be hazardous, Contractor immediately shall (i) stop work in the area affected, (ii) take measures appropriate to the condition to keep people away from the suspected Hazardous Material and, (iii) report the condition to Owner in writing. If the Work is so stopped and Hazardous Material is found, the Work in the affected area shall not thereafter be resumed except by the issuance of a Construction Change Directive pursuant to Section 9.02 of this Contract. Any such Construction Change Directive shall be limited to, an adjustment to the Substantial Completion Date appropriate. If no Hazardous Material is found after the Work is stopped, no Construction Change Directive is required to resume the Work in the affected area.

ARTICLE 25

MISCELLANEOUS

Section 25.01. No Waiver. No consent or waiver, express or implied, by either party to this Contract or of any breach or default by the other in the performance of any of its obligations hereunder shall be deemed or construed to be a consent or waiver to or of any other breach or default by such party. Failure on the part of the Owner to complain of any act or failure to act of the Contractor or to declare the Contractor in default, irrespective of how long such failure continues, shall not constitute a waiver of the rights of Owner.

Section 25.02. Assignment. This Contract shall not be assigned, delegated, or transferred in whole or in part by the Contractor nor shall the Contractor assign any monies due or to become due to it without the prior written consent of the Owner.

Section 25.03. Governing Law. This Contract is entered into in Tennessee and shall be governed by and construed according to the laws of Tennessee. Any and all disputes arising out of this Contract, and/or the Project shall be decided by a state or federal court of competent jurisdiction in Memphis, Shelby County, Tennessee.

Section 25.04. Execution of Contract. The parties hereby agree and express their intent to execute this Contract electronically if Owner has a designated information processing system. The parties also hereby agree that this Contract may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

Section 25.05. Article and Section Headings. Article and section headings contained in this Contract are for ease of reference only and shall not affect the interpretation or meaning of this Contract.

Section 25.06. Parties in Interest. This Contract shall inure to the benefit of and be binding upon the Parties and their respective successors, assigns and legal representatives. It is specifically agreed between the Owner and the Contractor that the Parties do not intend to create any third-party beneficiary rights by the execution of this Contract.

Section 25.07. Severability. If any one or more of the provisions contained in this Contract shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this Contract, but it shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

Section 25.08. Written Notices. Whenever by the terms of this Contract notice shall be given either to Owner or to Contractor, such notice shall be in writing and shall be sent by regular United States Postal Service, by hand-delivery, by registered or certified mail, by a nationally recognized overnight delivery service or by electronic mail with a delivery receipt. Notice intended for Owner shall be addressed to the Vice President of Operations as follows with a copy to Owner's General Counsel at the address for regular mail:

If to the Owner, address to:

Regular Mail or Hand Delivery
Vice President of Operations
Memphis-Shelby County Airport Authority
2491 Winchester Rd., Suite 113
Memphis, Tennessee 38116-3856

Certified Mail or Overnight Delivery
4150 Louis Carruthers Drive
Memphis, TN 38118
(901) 922-8000

If to the Contractor, address to:

Either Party, from time to time, may change its address by giving written notice to the other Party.

Section 25.09. Exhibits. All exhibits described in this Contract shall be deemed to be incorporated into and made a part of this Contract. If there is any inconsistency between this Contract and the provisions of any exhibits, the provisions of this Contract shall control to the extent of the inconsistency.

Section 25.10. Entire Contract. This Contract, together with the exhibits and the other Contract Documents, constitutes the entire agreement between the Owner and the Contractor and supersedes all prior written or oral agreements, understandings, representations, negotiations, and correspondence between the Parties. This Contract shall not be supplemented, amended or modified by any course of dealing, course of performance or usage of trade and may only be amended or modified by a written instrument duly executed by officers of both Parties.

Section 25.11. Non-Federally Assisted Projects. Regardless of the funding source for the Project, Contractor hereby agrees to comply with all nondiscrimination provisions of this Contract.

Section 25.12. Disadvantaged Business Enterprise Participation.

(a) The Project is subject to the requirements of Owner's Business Diversity Development Program (BDDP) and Small Business Participation Program (SBPP). It is the responsibility of the Contractor to see that all requirements of the BDDP and SBPP are met. The Disadvantaged Business Enterprise (DBE) participation goal for the Project is **EIGHT PERCENT (8%)**. This percentage is defined as the dollar value of subcontracts awarded to certified DBEs divided by the base bid or alternate amount. To qualify, a firm must be included on the Owner's list of certified DBE firms.

(b) Proposed changes to the designated participating DBEs during performance of the Work must be submitted to the Owner. Contractors must make every effort to replace a DBE subcontractor with another certified DBE, based on said DBEs' availability. All substitutes for DBE subcontractors or joint ventures require prior approval of the Owner, such approval not to be unreasonably withheld; and said approval may be granted for reasons including, but not limited to, the following: (1) subcontractor requests that its subcontract or joint venture agreement with the prime contractor be voided; (2) subcontractor is unable to perform the Work; and/or (3) subcontractor has consistently performed unacceptable work.

(c) A determination by the Owner that the Contractor has either failed to comply with this Section 25.12, to timely submit to Owner requested documentation related hereto, to cooperate with Owner, or to answer inquiries truthfully shall subject the Contractor to any or all of the following penalties:

- (1) Withholding from the Contractor all future payments under this Contract until the Contractor is in compliance; and/or
- (2) Cancellation, termination, or suspension of this Contract, in whole or in part; and/or
- (3) Payment by the Contractor to the Owner of an amount equal to the difference in the DBE dollar value achieved in documented DBE participation or any lesser amount or penalty as deemed appropriate by the Owner, which dollar value shall be considered liquidated damages for failure to perform the requirements of this Contract and for which the Contractor and all its subcontractors agree to be bound.

(d) A violation of this provision shall be considered a material breach of this Contract. If, in the opinion of the Owner, the Contractor has made significant deviations from the DBE program commitments, such deviations shall be considered a breach of this Contract.

Section 25.13. No Financial Benefit. Contractor understands and agrees that no Owner employee or member of the Board of Commissioners, Memphis City Council or Shelby County Commission shall receive any financial benefit arising out of this Contract, either directly or indirectly. Further, any fees paid to any person or entity by Contractor for assistance in obtaining this Contract with Owner must be fully disclosed to Owner. Notwithstanding any term, condition, obligation or provision in this Contract, any other writing, any other agreement, any oral understanding or agreement, or any conduct or failure to act by the Owner, Contractor stipulates and agrees conclusively that Contractor has against

the Owner no right, entitlement or claim for any payment, compensation, cost or remuneration of any type other than pursuant to the terms of this Contract.

ARTICLE 26

FEDERAL AVIATION ADMINISTRATION (FAA) **REQUIRED CONTRACT PROVISIONS**

Section 26.01. FAA Required Provisions. Federal laws and regulations require that specific contract provisions be included in certain contracts and subcontracts. All such provisions are set forth in Exhibit E, which is attached hereto and incorporated herein by reference. Contractor hereby agrees to insert these provisions in each contract and subcontract (to the extent applicable) related to the performance of this Contract and to require each of its subcontractors to do the same. Contractor also hereby agrees to incorporate these provisions by reference for work done under any purchase order, rental agreement or other agreement for supplies or services related to the performance of this Contract. Contractor further agrees to be responsible for compliance with these provisions by any subcontractor, lower-tier subcontractor, or service provider. Contractor acknowledges that the FAA prevents any modification to these provisions that creates a conflict with federal laws and regulations or changes the intent of the required provision.

ARTICLE 27

STATE REQUIRED CONTRACT PROVISIONS

Section 27.01. State of Tennessee Laws and Regulations - Grant Contract Provisions. State laws and regulations require that specific contract provisions be included in certain contracts and subcontracts. All such provisions are set forth in Exhibit F, which is attached hereto and incorporated herein by reference.

*The remainder of this page intentionally left blank.
[Signature page to follow.]*

IN WITNESS WHEREOF, the Parties have made and executed this Contract as of the day and year first above written.

**MEMPHIS-SHELBY COUNTY
AIRPORT AUTHORITY**

CONTRACTOR

By: _____

By: _____

Title: President and CEO

Title: _____

Approved as to Content:

By: _____

Title: Vice President of Operations

Approved as to Form and Legality:

By: _____

Title: General Counsel

Reviewed and Approved:

By: _____

Title: Director of Development

**EXHIBIT A
TO
LUMP SUM CONSTRUCTION CONTRACT
FOR
“A” BAGGAGE MAKEUP CAROUSEL REPLACEMENT – DESIGN/BUILD**

**BY AND BETWEEN
THE MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
(CONTRACTOR NAME)**

SCOPE OF WORK

This project will replace the existing A outbound baggage flat plate carousel with a new sloped plate carousel as well as conveyor system replacement. The scope of work consists of removal & replacement of existing conveyor and carousel systems, including necessary associated control components at the Memphis International Airport. The work includes, but is not limited to, electrical modifications, conveyor and carousel equipment installation and other efforts as required. This will be a design/build contract. The scope of work is more specifically described in the Contract Documents, as defined in Article 2 of this Contract.

**EXHIBIT B
TO
LUMP SUM CONSTRUCTION CONTRACT
FOR
“A” BAGGAGE MAKEUP CAROUSEL REPLACEMENT – DESIGN/BUILD**

**BY AND BETWEEN
THE MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
(CONTRACTOR NAME)**

CONTRACT DOCUMENTS

NON-TECHNICAL SPECIFICATIONS

DIVISION 0

00001	Project Title Page
00010	Table of Contents
00015	List of Drawings
00100	Legal Notice
00200	Instructions to Bidders/Proposers
00405	Proposal
00410	Proposal Guarantee
00445	Disadvantaged Business Enterprise (DBE) Requirements
00490	Addenda and Modifications
00500	Construction Contract
00605	Certificate of Secretary
00610	Performance Bond & Labor and Material Payment Bond
00630	Application for Payment
00640	Business Diversity Monthly Compliance Report
00765	Supplemental Provisions
00801	Airport Construction Safety Requirements
00802	Airport Security Requirements

General Provisions

Section 10	Definition of Terms
Section 20	Proposal Requirements and Conditions
Section 30	Award and Execution of Contract
Section 40	Scope of Work
Section 50	Control of Work
Section 60	Control of Materials
Section 70	Legal Regulations and Responsibility to Public
Section 80	Execution and Progress
Section 90	Measurement and Payment
Section 150	FAA General Provisions Addendum

General Construction Items

C-105	Mobilization
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DIVISION 1

01100	Summary of Work, Sequence of Construction & Liquidated Damages
01125	Renovation
01210	Allowances

01230	Alternates
01250	Amendment Procedure
01310	Preconstruction Conference & Progress Meetings
01320	Schedules and Reports
01325	Delays and Extension of Time
01330	Submittals
01351	Storage and Protection
01455	Quality Control and Quality Assurance Testing Programs
01500	Construction Facilities and Temporary Controls
01600	Product Requirements
01630	Product Substitution Procedures
01700	Field Engineering
01720	Project Record Documents
01730	Cutting and Patching
01741	Cleaning
01770	Close-Out Procedures
01771	Affidavit of Contractor
01772	Final Waiver and Release of Lien: PRIME
01774	Contractor Warranty Form
01775	Consent of Surety Company to Final Payment
01783	Electrical Characteristics, Capacities, and Wiring Diagrams
01784	Manufacturer's Supervision

TECHNICAL SPECIFICATIONS

13 01 00	Baggage Claim Control System
26 05 00	Common Work Results for Electrical
26 05 13	Medium- Voltage Cables
26 05 29	Hangers and Supports for Electrical Systems
26 05 33	Raceways and Boxes for Electrical Systems

Appendices

MSCAA Design Guide - Construction Standards

LIST OF DRAWINGS

DRAWINGS, entitled A Baggage Makeup Carousel Replacement - Design/Build, 19-1423-10-01, dated 10/7/2021, with revisions, as noted on the drawing sheets:

<u>SHEET NO.</u>	<u>INDEX OF SHEETS</u>
G0.00 / 1 of 6	COVER SHEET
A2.01 / 2 of 6	APRON LEVEL TERMINAL "A" CAROUSEL
A2.02 / 3 of 6	CONCOURSE LEVEL TERMINAL "A" CONVEYOR
A001 / 4 of 6	CONCOURSE A-O/ B NEW CONV PLAN & ELEV
A001A / 5 of 6	CONCOURSE A-O/ B DEMO PLAN & ELEV
A002 / 6 of 6	CONCOURSE A- TICKET COUNTER PLAN

**EXHIBIT C
TO
LUMP SUM CONSTRUCTION CONTRACT
FOR
“A” BAGGAGE MAKEUP CAROUSEL REPLACEMENT – DESIGN/BUILD**

**BY AND BETWEEN
THE MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
(CONTRACTOR NAME)**

OWNER CONTROLLED INSURANCE PROGRAM

C.1. Owner Controlled Insurance Program

The Owner has elected to implement an Owner Controlled Insurance Program (OCIP) that will provide **Workers’ Compensation, Employer’s Liability, Commercial General Liability, Excess Liability and Builders’ Risk insurance** for Contractors and Subcontractors of every tier who have been properly enrolled and are providing direct labor to the Project. A general summary of coverage provided by the OCIP is included in the MSCAA OCIP Manual, (hereinafter called the Manual), a copy of which is attached hereto and made a part of this Agreement and should be attached to and incorporated in every subcontract. All terms and conditions of Exhibit C will apply during the term of the contract. The Owner agrees to pay all premiums associated with the OCIP.

While the OCIP provides uniform coverages and reasonable limits, the OCIP is not intended to meet all the insurance needs of the Contractor and eligible Subcontractors who have been properly enrolled. In addition to any insurance provided by Owner, the Contractor and all Subcontractors working on the Project will be responsible for providing certain insurance as specified in paragraph C.2. Contractors and eligible Subcontractors should discuss the OCIP with their insurance agent or consultant to assure that other proper coverages are maintained. Contractor and eligible Subcontractors enrolled in the OCIP agree that the insurance company policy limits of liability, coverage terms and conditions shall determine the scope of coverage provided by the OCIP.

C.1.1. Applicability of the OCIP

Participation in the OCIP by the Contractor and all eligible Subcontractors is mandatory but not automatic. The Contractor and each eligible Subcontractor (as defined below) must follow the enrollment procedures shown in the Manual. The Contractor shall comply with all requirements of the OCIP as outlined in the OCIP Manual and shall require all eligible Subcontractors to comply with requirements of the OCIP manual. The Manual may be updated and revised during the course of construction to reflect any changes in State Law, Rules and/or Regulations or Procedures that may be necessary or appropriate, and said revisions will replace all previous versions. Copies of any revised Manual will be distributed by the OCIP Administrator.

- If the Contractor or any eligible Subcontractor fails to enroll any of its eligible Subcontractors of any tier, it will be subject to a penalty charge of the full and complete deduct as shown in C.1.2.c or 3% of the subcontract cost, whichever is greater. Note: Collection of the penalty charge of any non-enrolled contractor(s) of any tier does not provide automatic coverage in the program.
- If any Contractor or any eligible Subcontractor enrolls in the OCIP more than 30 days after its start date, it will have to provide a No Known Loss Letter to the Carrier along with the enrollment documentation.

Eligible Subcontractor includes all Subcontractors providing or subcontracting for direct labor on any Designated Project (see definition of ineligible Subcontractors below).

Ineligible Subcontractor includes (but is not limited to) subcontractors performing any type of environmental remediation work (example: asbestos or underground tank removal), consultants, suppliers (that do not perform or subcontract installation), vendors, materials dealers, guard services, janitorial services, truckers (including trucking to any Designated Project where delivery is the only scope of work performed), employee leasing companies, temporary labor services and other temporary project services. However, such Employee leasing and temporary labor service companies can be insured

by the OCIP but must be submitted for review to the OCIP administrator prior to acceptance.

A Designated Project is a project designated and approved by the Owner as a Designated Project and enrolled by the OCIP Administrator with the insurance company. This project is a Designated Project. A Designated Project includes operations necessary or incidental to the Work. The Contractor's/Subcontractor's regularly established workplace, plant, factory, office, shop, warehouse, yard, or other property even if such operations are for fabrications of materials to be used at the job site or training of apprentices will be considered off-site and not covered by the OCIP.

Unless otherwise directed by the Owner, the Contractor, eligible Subcontractors, and all Subcontractors not enrolled in the OCIP, will be required to maintain at least the insurance coverages set forth in paragraph C.2 and are required to participate in the MSCAA OCIP Safety Program. Contractor will promptly furnish the Owner, or their designated representative, certificates of insurance giving evidence that all required insurance is in force.

C.1.2. Contractor Insurance Cost Identification

The Contractor and eligible Subcontractors will exclude their cost for all insurance coverages to be provided by the Owner for the work at any Designated Project from their bid. The Contractor and each Subcontractor of any tier warrant that all insurance premium calculations for work performed at the Designated Project Site have been correctly identified and removed from their bids.

C.1.3. Change Order Pricing

Contractor and all enrolled Subcontractors will price each change order to exclude the cost of insurance.

C.1.4. Assignment of Return Premiums

The Owner will be responsible for the payment of all premiums associated solely with the OCIP and will be the sole recipient of any dividend(s) and/or return premium(s) generated by the OCIP. In consideration of the Owner's provision of said coverages under the OCIP program, the Contractor and eligible Subcontractors agree to:

- 1) Exclude all applicable insurance costs for coverage provided by the Owner associated with their contract work and excluded from their bid; and cooperate with the OCIP Administrator in the administration of the OCIP.
- 2) Irrevocably assign to and for the benefit of the Owner, all return premiums, premium refunds, premium discounts, dividends, retentions, credits, and any other monies in connection with the OCIP insurance. Contractor also assigns its right of cancellation of all insurance policies provided by Owner. Contractor agrees to evidence such assignment by executing and delivering the Form-2. Contractor further agrees to require each eligible Subcontractor to execute the assignment on the Form-2, for the benefit of the Owner.

C.1.5 Audit of Contractor and/or Subcontractor Payroll

For insurance purposes, the Contractor and all tiers of Subcontractors agree to keep and maintain accurate and classified records of their payroll for operations at any Designated Project. Contractor and all eligible Subcontractors agree to furnish a copy of the Monthly Payroll Reporting Form, Form 5, to the OCIP Program Administrator by the 20th of each month and attach a copy of the Form-5, to their monthly pay application. If this report (Form-5) is not attached to the monthly pay application, payment may be held until the report is received.

The Contractor and all eligible Subcontractors will permit the Owner and its representative to examine and/or audit its books and records pertaining to any Designated Project. Contractor and eligible Subcontractor will also provide any additional information to the Owner, or its appointed representatives as may be required. At the end of each contract, an audit may be performed of the reported payroll by the OCIP Carrier.

Upon Final Completion of each contract, the Contractor and eligible Subcontractors will furnish a completed and signed Form-4 - Notice of Anticipated Completion Form (a copy of which is attached hereto as "Form-4") to the OCIP Administrator, together with all required documentation.

Demobilization payments will not be released until all closeout documentation has been received and approved.

C.1.6. OCIP Deductibles

General Liability:

If a claim arises under the Owner provided Commercial General Liability OCIP policy from the partial or sole negligence of a Contractor or Subcontractor, or for violation of any OCIP Safety Requirements, such Contractor or Subcontractor shall be responsible for reimbursing the Owner's deductible to the extent of their respective negligence, as determined solely by owner, up to a maximum of \$10,000 per occurrence per Contractor.

Builders Risk:

The Contractor shall be responsible for a deductible of \$25,000 for each and every loss.

C.1.7. Termination/Modification of the OCIP

The Owner reserves the right to terminate or to modify the OCIP or any portion thereof. To exercise this right, the Owner will provide thirty (30) days advance written notice of termination or material modification to the Contractor and all eligible Subcontractors covered by the OCIP. In such event, the Contractor will promptly obtain appropriate replacement insurance coverage acceptable to the Owner. Written evidence of such insurance will be provided to the Owner prior to the effective date of the termination or modification of the OCIP coverages. The reasonable cost of such replacement insurance will be reimbursed by the Owner to the Contractor.

SPECIAL NOTE: The Contractor and eligible Subcontractors who have completed their work at any Designated Project and whose insurance as provided by MSCAA OCIP has been terminated, and who returns to the site to perform warranty work does so under its own insurance coverages and not under those provided by MSCAA OCIP.

C.2 Contractor Provided Coverages

All insurance obtained by the Contractor pursuant to this Agreement shall be written by insurance companies licensed to do business in Tennessee and acceptable to Owner.

Prior to the commencement of any operations by or on behalf of the Contractor relating to the Project, and with respect to any and all such operations, the Contractor shall procure, maintain and provide to Owner and the Program Manager:

- 1) Evidence of Contractor's **Commercial Automobile Liability Insurance**. A certificate of insurance and copy of endorsement shall be provided as evidence of:
 - a) Coverage for Owner, their officers, directors, and employees as additional insureds.
 - b) Coverage to apply to all liability arising out of the ownership or use of all vehicles owned by, hired by, or used on behalf of the Contractor.
 - c) Waiver of Subrogation to be provided in favor of the Owner, the Design Professional, the Program Manager and their officers, directors, and employees.
 - d) If hazardous materials or waste are to be transported, the policy will be endorsed with the MCS-90 endorsement in accordance with the applicable legal requirements.

This insurance shall be for an amount not less than \$1,000,000 combined single limit liability.

- 2) Evidence of Contractor's **Workers' Compensation and Employer's Liability Insurance**. A certificate of insurance or, at Owner's request, a certified policy copy shall be provided as evidence of:
 - a) Coverage for claims for damages arising out of bodily injury, occupational sickness or disease or death of Contractor's employees under any applicable workers' compensation statute or any other applicable employers' liability law. Certificate of insurance or policy must clearly identify that coverage applies in the state of Tennessee.
 - b) A waiver of subrogation by the insurer against the Owner the Design Professional, the Program Manager and their officers, directors and employees.
 - c) This insurance shall include Employer's Liability limits of not less than \$1,000,000 bodily injury each accident, \$1,000,000 bodily injury by disease each employee and \$1,000,000 bodily injury by disease in the aggregate.
 - d) All Enrolled Contractors must provide Workers' Compensation and Employer's Liability insurance covering all employees for injuries that occur AWAY from the Designated Project Site or after OCIP termination, expiration, or cancellation.
 - e) Ineligible subcontractors or subcontractors not enrolled must provide coverage for ALL operations.

- 3) Evidence of Contractor's **Commercial General Liability Insurance**. Certificate of insurance and copies of endorsements to Contractor's primary commercial general liability policy and shall be provided as evidence of:
- a) Coverage for Owner and the Design Professional, Program Manager, their officers, directors, and employees as additional insureds as respects claims or liabilities arising from or connected with Contractor's work, operations and completed operations. The additional insured endorsements shall be at least as broad as the ISO CG 2010 (1001) during the course of construction and CG2037 (1001) until the expiration of the statute of repose, or its carrier equivalent.
 - b) Coverage shall be primary and non-contributing with any coverage Owner maintains in its own name and on its own behalf.
 - c) Coverage shall be written on an occurrence coverage form, with coverage at least as broad as that provided under the current edition of the ISO Commercial General Liability coverage form, CG 0001. Other than standard exclusions applicable to pollution, asbestos, mold, employment practices, ERISA and professional liability, there shall be no limitations or exclusions beyond those contained in the standard policy forms which apply to property damage, products and completed operations, contractual liability, or construction defects. In addition to procuring and maintaining this insurance during the duration of the contract, contractor agrees to continue to procure and maintain products and completed operations liability insurance coverage for a minimum of six (6) year(s) after the date the contract is completed or terminated or in accordance with the applicable statute of limitations under state law, whichever is longer.
 - d) Waivers of subrogation by insurers against Owner, Design Professional, Program Manager and their officers, directors, and employees.
 - e) Contractual Liability Insurance applicable to the indemnification agreement contained in Section 21.01 of this Agreement.
 - f) The required amounts of primary Commercial General Liability Coverage in the amount of:

\$1,000,000	Bodily Injury and Property Damage Limit for each occurrence
\$1,000,000	Personal & Advertising Injury
\$2,000,000	General Aggregate (Annual)
\$2,000,000	Products/Completed Operations Aggregate (annual)

 The general aggregate limit shall apply separately to each project.
 - g) All Enrolled Contractors must provide General Liability insurance covering third-party losses that occur AWAY from the Project Site (including products liability for any product manufactured, assembled or otherwise worked upon away from the Designated Project Site) or after OCIP termination, expiration or cancellation.
 - h) Ineligible contractors or subcontractors not enrolled must provide coverage for ALL operations.
 - i) The policy will be endorsed to exclude any "Designated Project" for onsite coverage only, if you are a participant in the OCIP.
- 4) Evidence of Contractor's **Excess or Umbrella Liability Insurance**. Certificate of insurance and copies of endorsements to Contractor's Excess or Umbrella liability policy and shall be provided as evidence of this excess liability or umbrella insurance with an annual an aggregate amount of not less than \$25,000,000 for the Contractor and \$1,000,000 limits required of subcontractors unless otherwise stated in the Contract Documents and shall be excess and follow form over primary coverages included herein. Such coverage will be excess and "drop down" for defense and indemnity in the event of exhaustion of the underlying insurances of Commercial, Automobile, Liability, Employer's Liability and the Commercial General Liability policies.
- 5) Evidence of **Professional Liability Insurance**:
 Per Claim and in the Aggregate: \$1,000,000
 All professional services firms must provide professional liability insurance appropriate for their profession. Architectural and engineering firms must provide coverage for liability arising out of design errors and omissions. The policies shall provide a three (3) year extended reporting period.
- 6) Evidence of **Contractors Pollution Liability Insurance**:
 Each Occurrence Limit and in the Aggregate: \$1,000,000
 Coverage applies to third-party bodily injury and property damage claims (including natural resource damage), and clean-up costs, caused by pollution conditions which result from covered operations performed by, or on behalf of, contractors and subcontractors of all tiers at the Designated Project Site. Coverage shall apply to claims for mold and

fungus damage that result from the work as well as gradual and sudden and accidental pollution incidents arising from activities of the contractors working at the project site.

Coverage must be evidenced for on-site and off-site transportation which may result in a pollution incident/event and non-owned disposal site coverage (if applicable to the project).

The policy shall be endorsed to provide a Waiver of Subrogation in favor of the Owner, Design Professional and Program Manager. In addition, the Owner, their officers, directors and employees shall be included as Additional Insureds.

7) Evidence of **Contractor's Equipment Insurance:**

The Contractor is responsible for their tools and equipment including, but not limited to, construction trailers and their contents and temporary scaffolding at the project site, whether owned, leased, rented, or borrowed. Contractor acknowledges and agrees that the Owner will not be responsible for any loss or damage to their tools and equipment. If insured, the Contractor's insurance policies covering tools and equipment will include a waiver of subrogation and any other rights of recovery in favor of the Owner. If uninsured, the Contractor will hold harmless the Owner, Program Manager and Design Professional for loss or damage to their tools and equipment.

8) **Aircraft/Aviation Liability Insurance** (If Applicable): NA

Each Occurrence Limit and in the Aggregate (including passenger liability):

The operator of an aircraft of any kind, whether manned or unmanned, must maintain liability insurance covering bodily injury and property damage on a Combined Single Limit basis. If non-employee passengers are carried, there cannot be a per-passenger sublimit.

Prior to commencing operations, the operator must provide the Owner with a certificate of insurance naming the Owner, their officers, directors, and employees as additional insureds on a primary and non-contributory basis. Operator and their insurer(s) must hold the Owner harmless and waive subrogation with respect to damage to the aircraft

If aircraft is to be used to perform lifts at the Designated Project Site, a "slung cargo" endorsement must be included to cover the full replacement value of any equipment being lifted.

NOTE: If the Contractor and / or eligible Subcontractor participating in the OCIP choose(s) to have the policy endorsed to include any "Designated Project" site during the construction period, coverage should be Excess and/or Difference in Conditions (DIC) of the OCIP and this cost should not be passed back to the Owner. Inclusion of any "Designated Project" Site on such insurance policies shall not replace the OCIP coverage or otherwise affect the cost identification requirement in paragraph C.1.2.

C.2.2. Contractor's Insurance Primary.

Any coverage applicable to Owner under Contractor's insurance policies shall be primary and non-contributing with any insurance maintained by Owner in its own name and on its own behalf. Copies of endorsements to Contractor's policies shall be provided to Owner.

C.2.3. Cancellation.

All such insurance shall be in form and substance satisfactory to the Owner and shall provide that not less than thirty (30) days' notice of cancellation or non-renewal, other than non-payment of premium which shall be ten (10) days' notice, be provided to Owner. If unavailable, Contractor must provide Owner with thirty (30) days' advance written notice of cancellation, other than non-payment of premium, which shall be ten (10) days' notice. Contractor must notify Owner of any material change or reduction in coverage to the Contractor's insurance policies.

C.2.4. Certificates of Insurance - Contractor Provided Insurance Coverage Requirements

As shown in Section C.2

Description of Operations for contractors participating in the OCIP shall read:

Workers' Compensation and Commercial General Liability coverages shown above do not apply to any Designated Project at the Memphis International Airport.

Additional Insured Wording for Contractors shall read:

Memphis-Shelby County Airport Authority, Program Manager, Design Professional and their officers, commissioners,

agents and employees as now or hereafter exist as respect to the services / work to be performed under this Agreement, for coverages as required by contract.

Additional Insured Wording for Subcontractors shall read:

For Subcontractors participating in the OCIP

The Memphis-Shelby County Airport Authority, Program Manager, Design Professional and their officers, commissioners, representatives, agents, and employees ATIMA are additional insureds for coverages as required by contract 19-1423-10-01.

For Subcontractors not participating in the OCIP

The Memphis-Shelby County Airport Authority, Program Manager, Design Professional and their officers, commissioners, representatives, agents and employees ATIMA and Awarding Contractor are additional insureds as respect to the services / work to be performed under this Agreement for coverages as required by contract 19-1423-10-01.

IN THE EVENT THAT THE LAW OF THE STATE IN WHICH THE PROJECT IS LOCATED (OR APPLICABLE LAW) LIMITS THE ADDITIONAL INSURED COVERAGE THAT OWNER MAY REQUIRE FROM CONTRACTOR AND SUBCONTRACTORS, THEN CONTRACTOR AND SUBCONTRACTORS SHALL BE REQUIRED TO OBTAIN ADDITIONAL INSURED COVERAGE TO THE FULLEST EXTENT OF COVERAGE AND LIMITS ALLOWED BY APPLICABLE LAW AND THIS CONTRACT SHALL BE READ TO CONFORM TO SUCH LAW.

Filing of Certificates

Certificates of insurance acceptable to the Owner shall be filed with the Owner by furnishing to the OCIP Administrator, prior to commencement of the Work. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment.

A sample is provided of a certificate of insurance is provided in the OCIP Manual.

MSCAA OCIP

c/o Willis Towers Watson National Project Insurance Practice.

Attn: OCIP Administrator

15305 North Dallas Parkway, Suite 1100

Addison, TX 75001

C.2.5. The Right of the Owner to Maintain Insurance.

In the event the Contractor fails to furnish and maintain the required insurance or to furnish certificates of insurance, the Owner shall have the right, at its option, to terminate this Agreement or to take out and maintain such insurance and hold the Contractor liable for the cost. Compliance by the Contractor with the requirements of this Article shall in no way relieve the Contractor from liability under any provision of this Agreement or the Contract Documents.

C.2.6. Other Insurance

Any type of insurance or any increase of limits of liability not described in this section which the Contractor or any Subcontractor requires for their own protection or on account of any statute will be their own responsibility and their own expense. Any type of insurance or any increases of limits of liability not described herein that the Contractor or any Subcontractor requires for its own protection or on account of statute shall be its own responsibility and its own expense. If the Contractor or the Subcontractors maintain any insurance policies covering owned, leased or borrowed, equipment, such policies shall contain a waiver of subrogation against the Owner. Each item must be shown as a line item and approved by the Owner.

C.2.7. Deductibles

The Contractor shall be responsible for the payment of the deductible amounts for any insurance in force pursuant to this Agreement whether such insurance is furnished by the Owner or the Contractor.

C.2.8. Insurance for Project Property While outside the United States and Canada.

If any project property is in transit or is located outside the continental United States or Canada for any reason, Contractor shall arrange to insure such property for its full replacement value separate from the other insurance described herein.

C.2.9. Subcontractors Flow-Down Clause.

Subcontractors of all tiers are subject to the same insurance requirements as Contractor. Contractor shall cause each Subcontractor employed by Contractor to purchase and maintain such insurance and upon request, must promptly furnish Owner with copies of certificates of insurance evidencing coverage for each Subcontractor.

C.2.10. No Representation of Coverage Adequacy.

In specifying minimum Contractor insurance requirements, Owner does not represent that such insurance is adequate to protect Contractor for loss, damage or liability arising from its work. Contractor is solely responsible to inform itself of the types or amounts of insurance it may need beyond these requirements to protect itself. The insurance requirements set forth in minimum amounts shall not be construed to relieve Contractor for liability in excess of such coverage, nor shall it preclude Owner from taking such other actions as is available to it under any other provision of the contract.

C.2.11. Contractor Responsibilities

The Contractor will cooperate with and will require all eligible Subcontractors to cooperate with The Owner and/or the OCIP Administrator with regards to the administration and operation of the OCIP. The Contractor and eligible Subcontractors' responsibilities will include, but not be limited to:

- 1) Compliance with all rules and regulations of the applicable State Insurance Bureau/Board; failure to meet state requirements may result in fines being assessed, and, if this occurs, the Owner shall deduct from monies due or to become due under the provisions of this contract for any applicable fines that are assessed against the Owner, the Contractor or any eligible Subcontractor;
- 2) Compliance with applicable Construction Safety Program;
- 3) Provision of necessary contract, operations and insurance information, including verification of current Worker's Compensation Experience Modifier;
- 4) Cooperation with any insurance company or OCIP Administrator with respect to requests for claims, payroll or other information required under the program;
- 5) The Contractor and all eligible Subcontractors shall adhere to and perform all reporting requirements as set forth in the Claims Procedures portion of the OCIP Program Manual.

C.2.12. Contractor's Responsibility for its Subcontractors.

The Contractor will include this Exhibit and the Manual with the bid documentation. The Contractor will require that all eligible Subcontractors participate in the OCIP and comply with all rules and procedures as outlined in MSCAA Enrollment Process Summary. It will be the Contractor's responsibility to submit to The Owner and its designated representative all bid documentation for approval. If Contractor fails to comply with this section and any eligible Subcontractors do not enroll in the program, the Owner has the right to retain the 3% of subcontracted work as a penalty from the awarding Contractor/Subcontractor as set out in C.1.2.c.

C.2.13. Approval of Forms and Companies

All insurance described in this Section will be written by an insurance company or companies satisfactory to the Owner and licensed to do business in Tennessee and will be in a form and content satisfactory to the Owner. No party subject to the provisions of this contract will violate or knowingly permit to be violated any of the provisions of the policies of insurance described herein.

C.2.14. Coverage to be provided by Contractor during Warranty Period

During the period following the final acceptance date and prior to expiration of the warranty period hereunder, Contractor will maintain in full force and effect all insurance as specified in paragraph C.2 covering all Work performed during such

period.

C.3. Waiver of Subrogation and Waiver of Rights of Recovery

Owner Controlled Insurance Program

Except as respects any deductibles identified above, Owner waives all rights of subrogation and recovery against the Contractor and all Subcontractors of all tiers to the extent of any loss or damage, which is insured under the OCIP. Except as respects the deductibles identified above, Contractor waives all rights of subrogation and recovery against the Owner, Design Professional and Program Manager, other Contractors and Subcontractors of all tiers to the extent of any loss or damage, which is insured under the OCIP. The Contractor and each Subcontractor will require all Subcontractors to similarly waive their rights of subrogation and recovery in each of their respective construction contracts with respect to their work on any Designated Project.

Contractor Provided Coverages

Contractor waives all rights of subrogation and recovery against the Owner, Design Professional and Program Manager, to the extent loss or damage is insured under the Contractor's policies. The Contractor and each Subcontractor will require all Subcontractors to similarly waive their rights of subrogation and recovery in each of their respective construction contracts with respect to their work on any Designated Project.

C.4. Project Safety Administration

It is the responsibility of the Contractor to maintain total control of safety to ensure that its employees and the general public will be provided an environment free of recognized hazards during construction activities. In carrying out this policy it is clear the only accepted level of performance is to be "Incident Free" on this project each and every day.

A. Project Safety Manual

The safety requirements of any Designated Project Safety Manual are a supplementary document to all Government rules, codes, and regulations. It is understood that the ultimate responsibility for providing a safe place to work rests with each individual Contractor. All Contractors are responsible for full compliance with the requirements and standards referenced in the manual.

B. New Employee Orientation

Each new Contractor or Subcontractor employee will be required to attend an orientation program. This orientation is designed to communicate all project specific safety policies, procedures, and expectations of "the Safety Team" in regard to the construction of any Designated Project.

C. Contractor Safety Program Review

To proactively monitor the safety, health and environmental performance of Contractors and Subcontractors the Owner and/or his Representative, will be conducting a periodic review of Contractor or Subcontractor safety programs. This will be a formal process, which will be done with or without advanced notice. Upon completion of the Safety Program Review, a list of recommendations will be provided to the Contractor or Subcontractor. There will be a timeline developed and agreed upon for the purpose of abating any deficiencies in the Contractor or Subcontractor safety program.

C.5. No Release

The provision of the OCIP by The Owner will in no way be interpreted as relieving the Contractor or any Subcontractor of any other responsibility or liability under this agreement or any applicable law, statute, regulation, or order.

C.6. CIP Exclusion Limitation

If any party's insurance includes an exclusion tied to Controlled Insurance Programs (a.k.a. "wrap-ups" or "CIPs") or other project-specific insurance, it may apply only to the extent of coverage available to that party under the CIP or other Sponsor-provided insurance. Such exclusion may not be broader than what the CIP or such other Sponsor-provided insurance actually covers.



MSCAA OCIP IV

An Owner Controlled Insurance Program Manual for Construction Projects

Revision	Revision Summary	Date
0	First Issue for OCIP IV Projects	4-26-17
1	Update to Zurich Claims Team	4-5-18
2	Update to Zurich Claims Team	10-18-18

MSCAA OCIP – ENROLLMENT SUMMARY

Contract Bid – All Contractors/Subcontractors

Bid package will be furnished to bidders

1. All eligible Contractors/Subcontractors of every tier will exclude their cost of insurance for coverage provided by the Owner from their bid. Contractors and eligible Subcontractors should discuss the OCIP with their insurance agent or consultant to assure that the OCIP insurance identification cost is accurate.
2. Contractors and Subcontractors at any tier shall not charge any eligible Subcontractor for its participation in the OCIP.
3. Workers' Compensation – Tennessee Payroll Rules are applicable to WC payroll. First dollar coverage is given to all Contractors on WC.
4. General Liability – Mandatory deductible not to exceed \$10,000 will apply to any loss as described in the OCIP manual. 5% credit will be applied to Contractor's premium for this deductible

Contract Award

Once notification of contract award has been received, all eligible Contractors/Subcontractors of every tier will complete and submit Form 2 with the required certificate of insurance. Any Contractors or Subcontractors who enroll in the OCIP 30 days after their start date will have to provide a No Known Loss Letter to the Carrier along with the enrollment documentation. The OCIP Administrator will:

- 1) Assign a location code for this contract, forward the **Form 2** to the insurance carrier for enrollment into program
- 2) Issue a certificate of insurance which will reflect all OCIP coverages. The original copy will be sent to the enrolled contractor/Subcontractor with a copy to their awarding contractor.

Change Order

Contractor and all enrolled Subcontractors will price each change order to exclude the cost of insurance provided by the Owner.

Monthly Payroll Reporting

The Enrolled Contractor/Subcontractor will receive a Payroll Request e-mail from the following email address "On behalf of Willis Admin(noreply-144@servmax.com)" at the beginning of each month during construction reminding them to complete their payroll report via the link in the email by the payroll due date. The payroll link will expire in 30 days. If the payroll link expires please contact your Willis Towers Watson CIP Administrator or call the toll free number (844) 260-9015 to receive an updated link.

If Contractor/Subcontract receives additional contracts

Once the contractor/Subcontractor has enrolled in the OCIP, all additional contract bids must also exclude the Contractor's cost of insurance for coverage provided by the Owner. **Form 2** must be submitted to the OCIP Administrator to receive confirmation of enrollment in the OCIP for the additional contract. (Contact the OCIP Administrator if you have questions). The OCIP Administrator will:

- 1) Assign a location code for this contract, forward the **Form 2** to the insurance carrier for enrollment into program
- 2) Issue a certificate of insurance which will reflect all OCIP coverages. The original copy will be sent to the enrolled contractor/Subcontractor, a copy to their awarding contractor.

When Contractor/Subcontract reaches Substantial Completion

Notice of Anticipated Completion - **Form 4** – Prior to completion of all work being performed under the contract. This will initiate Closeout Procedures. Payroll and Receipts may be audited.

When Contractor/Subcontractor has completed the Work

Contractor should notify their insurance agent/broker to remove any exclusion for this Designated Project from their primary policies.

Claims

All Contractors/Subcontractors must follow claims rules and procedures outlined in the MSCAA OCIP Manual.

Safety

All Contractors/Subcontractors must follow safety rules and procedures outlined in the MSCAA OCIP Site Specific Safety Plan.

Notice to All Contractors/Subcontractors

Failure to follow the Enrollment or Claims procedures outlined in MSCAA OCIP Manual may result in fines being assessed by the State Bureau/NCCI, State's Workers' Compensation Commission or the Owner against the Contractor or Subcontractor. If the Owner or Carrier is assessed fines due to Contractor's or Subcontract's failure to follow State rules or regulations, the Owner will deduct from monies due or to become due for any applicable fines.

CHANGES TO ANY OCIP REQUIREMENT OR PROCEDURE MUST BE APPROVED BY THE OWNER AND OCIP ADMINISTRATOR. NO CONTRACTOR OR SUBCONTRACTOR HAS THE AUTHORITY TO AMEND THE OCIP REQUIREMENTS.

INTRODUCTION

This manual identifies, defines, and assigns responsibilities related to the administration of the Memphis-Shelby County Airport Authority (MSCAA) Owner Controlled Insurance Program (OCIP).

This manual:

- Describes the OCIP and details the insurance-related responsibilities of the various parties involved.
- Provides a basic description of the OCIP structure and operation, with an overview of coverage provided by the OCIP and guidelines for carrying out specific administrative and audit procedures.
- Provides answers to questions that are likely to arise during the course of the project.

Because it is impossible to anticipate every question or situation that may arise, the directory lists those involved in the administration of the OCIP and their areas of expertise. Please feel free to call with any questions.

This Manual will be updated as changes dictate during the course of this project.

NOTE

- This Manual does not, and is not intended to, provide coverage interpretations or complete information about coverages.
- The terms and conditions of the insurance policies govern how coverage is applied.
- The information herein is not intended to alter any provisions of the actual contract documents of the Contractors, and if any such conflict occurs, the contract documents will govern.

CHANGES TO ANY OCIP REQUIREMENT OR PROCEDURE MUST BE APPROVED BY THE SPONSOR AND OCIP ADMINISTRATOR. NO CONTRACTOR OR SUBCONTRACTOR HAS THE AUTHORITY TO AMEND THE OCIP REQUIREMENTS.

ADMINISTRATION

Program Management

OCIP Program Coordinator

Willis Towers Watson

John Shorten

8285 Tournament Drive, Suite 130
Memphis, TN 38125

Phone: (901) 248-3102

Fax: (901) 248-3101

E-mail: john.shorten@willistowerswatson.com

OCIP Program Unit Manager

Willis Towers Watson National Project Insurance Practice

Becky Hubert

15305 North Dallas Parkway, Suite 1100
Addison, TX 75001

Phone: (972) 715-6239

Fax: (972) 386-5561

E-mail: becky.hubert@willistowerswatson.com

OCIP Administration

Willis Towers Watson National Project Insurance Practice

Rebecca Trejo

15305 North Dallas Parkway, Suite 1100
Addison, TX 75001

Phone: (972) 715-6219

Fax: (972) 386-5561

E-mail: rebecca.trejo@willistowerswatson.com

On-Site Safety

Willis Towers Watson

Wes Shelby

4225 Airways Blvd.
Memphis, TN 38116

Phone: (901) 344-1659

Fax: (901) 345-6636

Cell: (901) 604-2136

E-Mail: wes.shelby@willistowerswatson.com

Claims Management

Zurich North America

PO Box 968077

Schaumburg, IL 60196-8077

FAX NUMBER FOR REPORTING CLAIMS: (877) 967-2567

GENERAL CLAIMS FAX NUMBER: (615) 872-1303

GENERAL PHONE NUMBER: (800) 366-8366

Leadership	Title	Phone	Email
Tammy Fike	GL Sr. Specialist	(404) 851-3616	tammy.fike@zurichna.com
Ginny Howard	WC Team Manager	(615) 872-1315	ginny.howard@zurichna.com
Karen Kingo	WC Pension Manager	(847)413-5868	karen.kingo@zurichna.com
Vea Storey	WC Claims Specialist	(615) 872-1241	veatrice.storey@zurichna.com
Patricia Painter	WC Claims Specialist	(615) 391-7501	patricia.painter@zurichna.com
Nat Woodruff	Claims Customer Service Executive	(404) 851-3278	nathaniel.woodruff@zurichna.com

Insurance Policy References

Workers Compensation

Insurance Company: Zurich American Insurance Company

Master Policy Number: WC 0183275-00

Each Contractor and/or Subcontractor will be issued their own Workers' Compensation Policy

Part One - Workers' Compensation TN State Limits

Part Two - Employers' Liability

Bodily Injury by Accident – Each Accident \$1,000,000

Bodily Injury by Disease – Policy Limit \$1,000,000

Bodily Injury by Disease – Each Employee \$1,000,000

Part Three – Other States Insurance

All States except those listed in Part One and Monopolistic States (OH,ND,WA,WY)

Commercial General Liability

Insurance Company: Zurich American Insurance Company

Master Policy Number: GLO 0183276-00

General Aggregate Limit (Other than Products – Completed Operations) \$4,000,000

Product-completed Operations Aggregate Limit \$4,000,000

Personal and Advertising Injury Limit (Any One Person or Organization) \$2,000,000

Each Occurrence Limit \$2,000,000

Fire Legal Liability (Any One Fire) \$250,000

Medical Expense Limit (Any One Person) \$10,000

Umbrella Liability

Insurance Company: ACE Property and Casualty Insurance Company

Master Policy Number: XCQ G46622029 001

Limits: \$25,000,000 excess of primary

Excess Liability – Layer 1

Insurance Company: Allied World National Assurance Company

Master Policy Number: 0310-6256

Limits: \$25,000,000 excess of \$25,000,000

Excess Liability – Layer 2

Insurance Company: Endurance Risk Solutions Assurance Co.

Master Policy Number: XSC30000293300

Limits: \$25,000,000 excess of \$50,000,000

Excess Liability – Layer 3

Insurance Company: Westchester Fire Insurance Company

Master Policy Number: G46621116001

Limits: \$25,000,000 excess of \$75,000,000

Program Definitions

Owner Controlled Insurance Program (OCIP)	The Insurance Program under which Workers' Compensation, Employer's Liability, Commercial General Liability and Excess Liability are procured or provided on a project "wrap-up" basis for Contractors/Subcontractors(s) of any tier, who have been properly enrolled, while performing operations on a designated Project Site for Memphis-Shelby County Airport Authority.
Insured	The Memphis-Shelby County Airport Authority, Contractors(s) and Subcontractors of any tier who are enrolled in the OCIP and who have been named in a policy, certificate of insurance, or advice of insurance.
Enrolled Contractors	"Enrolled Contractors", mean "Eligible Contractors" who, prior to the commencement of their work on the covered project, have completed the appropriate enrollments documents for the "designated project site".
Insurer	Insurance Company, as identified in the Insurance Policy Reference section.
OCIP Coordinator and Administrator	The firms responsible for the insurance broker and administration of the OCIP.
OCIP Safety Consultants	These representatives are employees of the Insurer and Willis Towers Watson who will provide safety consulting services to MSCAA and its contractors enrolled in the OCIP.
Project Description	All Designated Projects identified and approved by the Owner and on file with the Insurance Company.
On-Site Activities/ Designated Project	<p>Zurich's designated project means: "The project shown in this Schedule, including operations on the project site or location that are necessary or incidental to the project as described in contract documents. "Designated Project" includes the work site(s) associated with such "designated project(s)" and any offsite staging areas, as long as they are dedicated solely to the "designated project(s)" and the sponsor agrees to provide coverage. Also included are those areas immediately adjacent to the "designated projects", including boundaries of local streets or public easement, in which the enrolled subcontractors at any tier perform work under their respective contracts."</p> <p>The OCIP does not provide insurance coverage for permanent yards or other locations of any Contractors/Subcontractors, except as specifically requested by Contractors and, if accepted by insurer, endorsed to the policy.</p>
Eligible Contractors	Insured by the OCIP: Eligible Contractors include all contractors providing direct labor on the Designated Project (see definition of ineligible contractors below). Temporary labor services and leasing companies are to be treated as subcontractors.
Ineligible Contractors	Not insured by the OCIP: Includes (but is not limited to) contractors performing any type of environmental remediation work (example: asbestos or underground tank removal), consultants, suppliers (that do not perform or subcontract installation), vendors, materials dealers, guard services, janitorial services, truckers (including trucking to any Designated Project where delivery is the only scope of work performed), Blasting Contractors or Any Person or organizations that manufactures or fabricates products or components outside the designated project that does not also install the product or component at the designated project, employee leasing companies, temporary labor services and other temporary project services. However,

such Employee leasing and temporary labor service companies can be insured by the OCIP but must be submitted for review to the OCIP administrator prior to acceptance.

Certificate of Insurance

Written evidence of the existence of coverage terms of a particular insurance policy.

COVERAGE SUMMARY

The OCIP coverage applies only to work performed under the Agreement at any Designated Project Site for eligible enrolled contractors. Contractor and Subcontractors must provide their own insurance as detailed in the contract.

Through a combination of insured and self-insured insurance programs the Owner, at its sole expense, will provide and maintain in force the types of insurance listed in subsection (1) through (4) below as a part of the OCIP for Contractor and eligible Subcontractors who have been enrolled. Contractor and eligible Subcontractors enrolled in the OCIP agree that the insurance company policy limits of liability, coverage terms and conditions shall determine the scope of coverage provided by the OCIP.

This section provides a brief description of the coverages provided under the OCIP. The Contractor shall refer to the actual policies for details concerning coverages, exclusions and limitations. Policies are available for review upon request.

While the OCIP is intended to provide uniform coverages and reasonable limits, the OCIP is not intended to meet all the insurance needs of the Contractor and all eligible Subcontractors who have been properly enrolled. Contractor and eligible Subcontractors enrolled in the OCIP agree that they will discuss the OCIP with their insurance agent or consultant to ensure that proper coverages are maintained. It is the contractors' responsibility to notify their agent that the work performed on-site will be insured under an OCIP.

1) **Workers' Compensation and Employers' Liability Insurance** (Off-site operations are excluded unless locations are scheduled & approved by the Owner and OCIP insurance carriers) with Statutory Limits with All States Endorsement and minimum Employer's Liability Limits will be provided as follows:

- a) \$1,000,000 Bodily Injury with Accident - Each Accident;
- b) \$1,000,000 Bodily Injury by Disease - Policy Limit
- c) \$1,000,000 Bodily Injury by Disease - Each Employee; and

Each Enrolled Contractor will be issued a separate Workers' Compensation policy. The premium and loss experience on the Project Site will be reported to the appropriate rating authorities in the normal manner for use in calculating Enrolled Contractors' future experience modifiers. OCIP loss experience will impact Contractor's future insurance costs and, therefore, compliance with the project safety guidelines will directly benefit all Contractors.

2) **Commercial General Liability Insurance**, (Off-site operations are excluded unless locations are scheduled & approved by the Owner and OCIP insurance carriers) will be provided on an "occurrence" form under a single liability policy. Certificates of insurance will be provided to the Contractor and all tiers of eligible Subcontractors reflecting the following Limits of Liability, Coverages, and Terms:

a) Limit of Liability: Limits of Liability Shared by all Enrolled Contractors

General Aggregate Limit (Other than Products – Completed Operations)	\$4,000,000
Product-completed Operations Aggregate Limit	\$4,000,000
Personal and Advertising Injury Limit (Any One Person or Organization)	\$2,000,000
Each Occurrence Limit	\$2,000,000
Fire Legal Liability (Any One Fire)	\$250,000
Medical Expense Limit (Any One Person)	\$10,000

b) Coverage and Terms:

- i) Occurrence Basis;
- ii) Products;
- iii) Contractual Liability specifically designating the indemnity provision of this agreement as an insured contract;
- iv) Completed Operations (Six Year Term);
- v) Independent Contractor/Subcontractor's Liability;
- vi) Personal Injury; Explosion, Collapse, and Underground (X, C, U) exclusion deleted;
- vii) Coverage limited to any Designated Project;
- viii) General Aggregate Limits will apply per project and annually;
- ix) Products and Completed Operations Aggregate Limit applies once or all projects and applies once for the policy period and extended completed operations period combined; and

- x) Policy Exclusions include (but are not limited to) asbestos, pollution, mold, professional liability, employment practices, EIFS, impaired property and work or operations performed away from any Designated Project Site.
 - c) If a claim arises under the Owner provided Commercial General Liability OCIP policy from the partial or sole negligence of a Contractor or Subcontractor, or for violation of any OCIP Safety Requirements, such Contractor or Subcontractor shall be responsible for reimbursing the Owner's deductible to the extent of their respective negligence, as determined solely by owner, up to a maximum of \$10,000 per occurrence per Contractor.
 - d) The limits of liability detailed under 2) a) apply to construction operations within the property boundary of the applicable Airport under the management of MSCAA and as per the issued policies' definitions.
- 3) **Umbrella and Excess Liability Insurance** (Off-site operations are excluded)
- a) Limits of Liability Shared by all Enrolled Contractors
 - i) \$100,000,000 per Occurrence
 - ii) \$100,000,000 Aggregate
 - iii) \$100,000,000 Products / Completed Operations Aggregate
- 4) **Builder's Risk Insurance** will be provided on "All-Risk" coverage on a replacement cost basis, subject to the limits of the insurance policy. This insurance will include the interests of the Owner the Contractor and all tiers of Subcontractors in the Work. The Builders Risk policy will not provide coverage against loss by theft or disappearance of any materials (unless the materials are to be incorporated into the Project), tools, or equipment of the Contractor or any tier of Subcontractor, or any other person furnishing labor or materials for the Work. The Contractor shall be responsible for a deductible of \$25,000 for each and every loss.

ACCIDENT REPORTING AND CLAIMS PROCEDURES

When accidents happen, everyone needs to work together. Even though the Contractors and each Subcontractor has instituted tough safety measures, work-related accidents are bound to occur. When they do, the OCIP Insurers stand ready to serve the Contractors and Subcontractors, but they need help if they are to perform this service in the most effective and efficient manner.

Each Contractor/Subcontractor should have the claims procedures and emergency numbers posted on the jobsite and in all vehicles.

The Insurer will have a claims adjuster available to handle all Commercial General Liability and Workers' Compensation claims.

The Insurer will arrange for legal counsel to handle all lawsuits emanating from the project.

Never discuss any accident or claim with anyone except authorized representatives of MSCAA, Contractor, the Insurer(s), and the Owners Insurance Broker or Law Enforcement agencies.

MSCAA Emergency Procedures (Serious Injuries)

1. Contact MSCAA Emergency Dispatch at **(901) 922-8333 (DO NOT call 911)**. Specific directions should be given to the accident scene. If the accident occurred in the SIDA area, give location in relation to an active taxiway/runway. If outside the SIDA, give location relative to a street or construction gate. Explain the extent of injuries.
2. Notify the on-site OCIP Safety Coordinator, Wes Shelby, (901) 604-2136 (cell).
3. Methodist South Hospital Emergency Room, 1300 Wesley Drive, Memphis, TN, will be used (901) 516-3700, the decision on the treating medical facility will be made by the EMT, in serious cases, the Med Trauma Center may be used.
4. Contractors must have currently qualified First Aid personnel on site at all times. First Aid supplies must be readily available and maintained, including rubber gloves to protect First Aid personnel against blood borne pathogens, etc.
5. After the call for emergency unit is made to MSCAA, the contractor should send escorts to all locations where the emergency unit could enter the site.
6. If the injured employee does not speak English, send a good interpreter to the treating medical facility.
7. The Contractor should provide the Medical Facility with a completed Authorization for Treatment form (sample provided in the OCIP Manual).

A. Workers' Compensation Claims

1. Seek immediate medical attention for the injured person(s).
2. Immediately notify your supervisor and project manager of the situation.
3. Notify the on-site OCIP Safety Coordinator, Wes Shelby, (901) 604-2136 (cell). If you cannot reach Wes, please leave a voice mail message.
4. Complete a **First Report of Injury form** and the **Claim Reporting Cover Sheet** (include appropriate Location Code) and forward to **Zurich Insurance Company** via fax **877-967-2567** or email usz_carecenter@zurichna.com immediately. If not possible, then send before the end of the business day.
5. MSCAA the Contractor's safety representative or designated person will transport the injured worker to

Concentra Medical Center
2831 Airways Boulevard
Suite 102
Memphis, TN 38132
Phone: (901) 348-0200
Hours: 8a.m. to 8p.m. (Mon. – Fri.)

If accident occurs and Concentra Medical Center is not open:

Methodist South Hospital
1300 Wesley Drive
Memphis, TN 38116
Phone: (901) 516-3700
24 Hours, 7 days per week

Or

Baptist Memorial Hospital DeSoto
7601 Southcrest Parkway
Southaven, MS 38671
Phone: (662) 349-4000
24 Hours, 7 days per week

6. Complete the **Accident Investigation Form** and forward it along with the **Claim Reporting Cover Sheet** to Wes Shelby, OCIP Safety Coordinator (e-mail: Wes.Shelby@willis.com, fax: (901) 345-6636, or mail: 4225 Airways Blvd., Memphis, TN 38116 before the end of the day.
7. Receipt of Acknowledgement of Claim and claim number from Zurich Insurance Company will be sent to the contact person provided on the Claim Reporting Cover Sheet and to Wes Shelby, OCIP Safety Coordinator. The claim number should be used for future reference.
8. All medical bills, hospital bills, etc. should be forwarded to Zurich Insurance Company identifying the injured employee and claim number.

After Hours / Close of Business Claims Reporting

1. Call Zurich Insurance Company at (800) 987-3373.
2. Tell the Zurich representative that an injury just occurred and that you need to be routed to the on-call specialist to authorize treatment.
3. You will either be placed directly in touch with the on-call person, or the on-call person will be paged and will return your call within two hours.
4. If hospital needs to speak with Zurich directly, the contractor will have to supply the hospital name and phone number to Zurich, and they will call the hospital directly.

B. Commercial General Liability Claims

Any occurrence involving Bodily Injury or Property Damage to members of the public that is NOT caused by an automobile accident.

1. Seek immediate medical attention for any injured person(s).
2. Immediately notify your supervisor and project manager of the situation.
3. Notify the on-site OCIP Safety Coordinator, Wes Shelby, (901) 604-2136 (cell). If you cannot reach, please leave a voice mail message.
4. Complete the **Claim Reporting Cover Sheet** (include appropriate Location Code) and forward to Zurich Insurance Company via fax **(866) 691-7068** or email usz_carecenter@zurichna.com immediately. If not possible, then send before the end of the business day.
5. Complete the Accident Investigation Form and Claim Reporting Cover Sheet (include appropriate Location Code) and forward to Wes Shelby, OCIP Safety Coordinator, (e-mail: wes.shelby@willis.com, fax: (901) 345-6636, or mail: 4225 Airways Blvd., Memphis, TN 38116.
6. Receipt of Acknowledgement of Claim and claim number from Zurich Insurance Company will be sent to the contact person provided on the Claim Reporting Cover Sheet and to Wes Shelby, OCIP Safety Coordinator. The claim number should be used for future reference.
7. All investigation reports, pictures, medical bills, hospital bills, etc should be forwarded to Zurich Insurance Company identifying the injured individual, claimant and claim number.

C. Duties in the event of a claim or suit

1. Follow the claims reporting procedures above.
2. You must see to it that the OCIP Safety Coordinator, Wes Shelby, is notified promptly of an "occurrence" which may result in a claim. Notice should include:
 - a. How, when and where the "occurrence" took place, and.
 - b. The names and addresses of any injured persons and witnesses.
3. If a claim is made or "lawsuit" is brought against any insured, you provide written notice of the claim or "lawsuit".
4. You and any other involved insured must:
 - a. Cooperate with the Insurer in their investigation, settlement or defense of the claims or "suit"; and
 - b. Assist the Insurer, upon their request, in the enforcement of any right against any person or organization which may be liable to the insured because of injury or damage to which this insurance may also apply.
5. No Insureds will, except at their own cost, voluntarily make a payment, assume any obligation or incur any expense, other than for first aid, without Insurer's consent.

D. Automobile Claims

Even though no Automobile Liability or Physical Damage coverage is provided under the OCIP, the Contractor/Subcontractor must notify Wes Shelby, OCIP Safety Coordinator, in writing of any automobile accident which could be related to the project. This should be done as soon as possible following the accident.

E. Contractor's Equipment Claims

Even though no coverage is provided under the OCIP for loss of or damage to Contractor's or Subcontractor's owned equipment the Contractor/Subcontractors must notify Wes Shelby, OCIP Safety Coordinator, in writing, of any loss or damage to their equipment at the project. This should be done as soon as possible, following first knowledge of loss or damage.

F. Miscellaneous Claims Notes

1. Any incident that involved injury to persons or property is to be reported to Wes Shelby, OCIP Safety Coordinator's office immediately.
2. Any claims adjuster representing a Contractor/Subcontractor's normal insurer who seeks to come onto Any Designated Project site must obtain written authorization from Wes Shelby, OCIP Safety Coordinator, prior to coming on the site. There will be no exceptions to this stipulation.

FORMS

Zurich Claim Reporting Cover Sheet

Incident Investigation Report

Workers' Compensation Referral Slip for Injured Employees

Authorization to Treat

Form 1 – Notice of Sub-contract Award

Form 2 – Enrollment Form

Form 4 – Notice of Anticipated Completion

Certificate of Insurance

ZURICH CLAIM REPORTING COVER SHEET

Email to: USZ_CARECENTER@ZURICHNA.COM

OR

Fax to: (866) 691-7068

Account Name: Memphis Shelby County Airport OCIP IV

Master WC policy #: WC 0183275-00

Master GL Policy #: GLO 0183276-00

Project Location: _____

Subcontractor/Employer: _____

Subcontractor/Employer Policy Number: _____

Contact Name: _____

Contact Phone Number: _____

Contact Fax Number: _____

Location Code: _____

Injured Worker: _____

Attention Zurich Representative – Please fax the receipt and claim number immediately to the contact above.

Incident Investigation Report

(To be completed within 24 hours by Supervisor at time of incident)

INJURED EMPLOYEE INFORMATION

Employee Name	_____	Male	_____	Femal e	_____	Date of Birth	_____	Ht.	_____	Wt.	_____
Employee Address	_____										
	Street	_____	City	_____	State	_____	Zip Code	_____	Home Phone	_____	
Employer Name	_____				Address	_____					
Date of Incident	_____	Time	_____	AM/PM	_____	Jobsite/Area	_____				
Employee Job Title	_____					Length of Employment	_____				
Weather Condition	_____				Shift	_____	Supervisor	_____			

UNSAFE ACTS

What actions caused or contributed to the incident?

- _____ Operating equipment without authority
- _____ Failure to warn/signal
- _____ Failure to secure/lock out/tag out
- _____ Reaching into/servicing equipment in operation
- _____ Making safety devices inoperable
- _____ Used defective equipment
- _____ Took unsafe/improper position
- _____ Horseplay, disruptive actions
- _____ Improper lifting or movement
- _____ Other: _____
- _____ No unsafe action

What actions caused or influenced above unsafe acts?

- _____ Unaware of job hazards
- _____ Inattention to hazards
- _____ Unaware of safe method/procedure
- _____ Tried to gain or safe time
- _____ Influence of fatigue/illness
- _____ Influence of emotions/stress
- _____ Defective vision/bodily defects
- _____ Under influence of alcohol or drugs
- _____ Failure to enforce procedures/rules
- _____ Other: _____

UNSAFE CONDITIONS

What conditions of tools, equipment, or environment contributed to incident?

- _____ Inadequate guard/barrier/safety device
- _____ Inadequate/improper protective equipment
- _____ Inadequate warning system
- _____ Defective or work tools/equipment materials
- _____ Congestion or restricted area
- _____ Fire or explosion hazard
- _____ Hazardous storage method
- _____ Unsecured against movement
- _____ Lighting/noise/visual obstruction
- _____ Environmental/atmospheric conditions
- _____ Other: _____
- _____ No unsafe condition

What caused or influenced above unsafe condition?

- _____ Defective/worn from normal use
- _____ Defective/worn from abuse/misuse
- _____ Housekeeping/cleaning failure
- _____ Lack of preventative maintenance
- _____ Inadequate maintenance
- _____ Exposure to environment
- _____ Inadequate purchasing
- _____ Safety inspection failure
- _____ Other: _____
- _____ Unknown

INJURY/ILLNESS DATA

Describe the nature and extent of injury/illness (body part affected, type of injury, etc.) _____

Was first aid administered? Yes No If yes, what type and by whom _____

Was employee taken to hospital/clinic? Yes No If yes, list name, address and phone number of _____

hospital/physician/nurse attending _____

List any eyewitnesses to the incident and others who might provide information about the incident _____

INCIDENT/ILLNESS EVALUATION

How did the incident occur? Describe in detail the task the employee was doing when injured or became ill. Include specifics such as equipment, structure tools, materials, objects (size, shape, and weight), people involved in the task, positions, distances, rate of movement, sequence of events, etc.

(Attach any additional information comments, documentation of interviews, sketches, pictures, etc. as necessary)

Incident Investigation Report

Incident/Illness Evaluation (continued)

Type of exertion/body motion during injury: Pull Lift Bend Reach Twist Other
 Was this the employee's regular job? Yes No How much experience does this employee have on this job? _____
 Was the employee trained in this job or task? Yes No When was last training on this task? _____
 Was this the employee's first job-related injury or illness? Yes No If no, briefly describe previous injuries (date, nature, extent, etc.) _____

Hours of overtime worked in last 24 hours _____ Did this possibly contribute to incident? If so, describe _____

Does a safety rule or policy apply to this task? Yes No If yes, describe rule and how employee followed or violated _____

Does a specific procedure for task exist? Yes No If yes, describe procedure briefly and if it was followed _____

Is protective equipment required for this task? Yes No If yes, describe equipment, if it was used, if it was adequate/functioned properly, and if the employee(s) were trained on it. _____

Is there possibly any third party which contributed to the incident? (Other contractors, employee, etc.) Yes No
 If yes, describe. _____

Did any unsafe physical/environmental conditions exist? Yes No If yes, describe conditions (physical, mechanical, electrical, etc.) which contributed to the incident _____

Is material handling equipment required for this task? Yes No If yes, was it used and did it function properly? _____

Possible actions to be taken to prevent reoccurrence

- | | | |
|--|---|---|
| <input type="checkbox"/> Reinstruction of employee(s) involved | <input type="checkbox"/> Do/revise Job Safety Analysis | <input type="checkbox"/> Repair/replace/modify equipment |
| <input type="checkbox"/> Preventative instruction of others who do job | <input type="checkbox"/> Revise/establish safety rule | <input type="checkbox"/> Improve clean-up procedure |
| <input type="checkbox"/> Training of employee(s) | <input type="checkbox"/> Reassign employee to another job | <input type="checkbox"/> Improve inspection procedure |
| <input type="checkbox"/> Action to improve enforcement | <input type="checkbox"/> Require/replace protective equipment | <input type="checkbox"/> Eliminate/reduce congestion |
| <input type="checkbox"/> Reprimand/discipline of employee(s) involved | <input type="checkbox"/> Install safety guard device | <input type="checkbox"/> Improve design/construction |
| | | <input type="checkbox"/> Improve environmental conditions |

CORRECTIVE ACTION(S) TAKEN OR PLANNED

What was/will be done	By Whom	Estimated Completion Date	Completion Confirmed	
			Date	Initials

Incident discussed with employee to prevent reoccurrence? Yes No Date _____
 Any disciplinary action taken? Yes No If yes, describe what type. _____

FOLLOW UP COMMUNICATION

- YES NO Incident site reviewed by supervisor with employee (and safety coordinator if applicable.)
 YES NO Incident review meeting conducted. Attended by _____
 YES NO Employee or supervisor reviewed incident with work group.
 YES NO Employee reviewed injury with safety committee
 YES NO Project Safety informed of incident

Date of Report _____ Prepared by _____ Title _____

Reviewed by _____ Superintendent _____ Signature _____

MSCAA OCIP IV

4225 Airways Blvd.
Memphis, TN, 38116

WORKER'S COMPENSATION REFERRAL SLIP FOR INJURED EMPLOYEES

On-Site EMT: (901) 922-8333

Authorized Clinic: **Concentra Medical Center**
2831 Airways Boulevard
Suite 102
Memphis, TN 38132
(901) 348-0200 (Phone)
(901) 348-0046 (Fax)

Clinic Hours: 8 a.m. to 8 p.m. (Mon. – Fri.)

Authorized After- **Methodist South Hospital**

Hours Clinics: **1300 Wesley Drive**
Memphis, TN 38116
(901) 516-3700

Baptist Memorial Hospital DeSoto

7601 Southcrest Parkway
Southaven, MS 38671
(662) 349-4000

Employee Name: _____ Date: _____

Employer: _____ Employer Policy Number: _____

Location Code (if known): _____ Claim Number (if known): _____

Account Name: **Memphis Shelby County Airport Authority OCIP IV**
Insurer: **Zurich**
Master Policy Number: **WC 0183275-00**

Instructions for medical facility:

The person listed above has been injured on the job. Please provide the employee with medical treatment per OCIP protocol.

MSCAA OCIP IV
Authorization to Treat

Local Office Information

Company Name: _____
Designated Representative: _____
Address: _____
Phone: _____ **Fax:** _____ **E-mail:** _____

Billing Information for Drug Screens

Company Name: **Zurich North America**
Address: PO Box 968077
Schaumburg, IL 60196-8077
Phone: (800) 366-8366 **Fax:** (615) 872-1303

Insurance Information for Work Comp Carrier

Company Name: Zurich American Insurance Company **Master Policy #: WC 0183275-00**
Address: PO Box 968077
Schaumburg, IL 60196-8077
Phone: (877) 928-4531 **Fax:** (866) 691-7068

Services Required

Worker's Comp Injuries _____

Drug Screen Required For (employer to check necessary testing):

____ Pre-Employment ____ Random
____ Probable Cause ____ Post Accident
____ Urine (collection only) ____ Breath Alcohol
____ Test Cup (Cocaine, PCP, etc.)

Treating Medical Center: Please be advised if negative, DO NOT send out. Be sure to mark on the Chain of Custody (COC) the information for the employer:

Employer: _____ **Fax:** _____

Special Instructions: Use TEST CUP. Do NOT send out unless the test reads positive.

Fax results to designated employer listed above.

Company Authorized Signature:

Date:

MSCAA IV - FORM 1

**MSCAA OCIP IV
Notice of Subcontract Award and Request For Insurance**

Willis Towers Watson National Project Insurance Practice

Rebecca Trejo
15305 North Dallas Parkway, Suite 1100
Addison, TX 75001

Phone: (972) 715-6219
Fax: (972) 386-5561
e-mail: rebecca.trejo@willistowerswatson.com
Cc:

becky.hubert@willistowerswatson.com

RE: Project Name: _____

This is to inform you that we have awarded the following subcontract to the following Subcontractor:

Name of Firm: _____

Address: _____ City: _____ State: _____ Zip: _____

Phone: (____) _____ Fax: (____) _____

Office Contact: _____ E-Mail: _____

Type of Work: _____ Job # _____ Contract Value: \$ _____

Award Date: _____ Estimated Start Date: _____

Awarding Contractor: _____

By: _____

Title: _____

Date: _____

Prime Contractor (if different) _____

DO NOT complete this form for your own company.

A Form-1 should be completed on each of your Subcontractors.

- **Award Date – date Notice to Proceed was given (Verbally or in Writing)**

- **Start date is mandatory – date shown will be the effective date of coverage.**

Any Contractors or Subcontractors who enrolls in the OCIP 30 days after their start date will have to provide a No Known Loss Letter to the Carrier along with the enrollment documentation.

- New Award
- Additional Contract
- Time & Material Contract
- Short Term (< 30 days)
- Small Contract (< \$30,000)

MSCAA OCIP IV ENROLLMENT FORM

CONTRACTOR'S INFORMATION

Contractor: _____ Indv _____ Ptshp _____ Corp _____ J/V _____

Address: _____ FEIN: _____

Office Contact: _____ Phone: _____ Fax: _____ Email: _____

Site Contact: _____ Phone: _____ Fax: _____ Email: _____

Safety Contact: _____ Phone: _____ Fax: _____ Email: _____

Insurance Contact: _____ Phone: _____ Fax: _____ Email: _____

Payroll Contact: _____ Phone: _____ Fax: _____ Email: _____

Address (if different): _____

CONTRACT INFORMATION

Contract Value: \$ _____

Job Name/Description: _____

Contract/JOB #: _____

Awarding Contractors: _____

Prime Contractors: _____

Award Date: _____ Start Date: _____ Est Completion Date: _____ Self Performed _____%,
 \$ _____ Subcontracted _____%; \$ _____ Est. # of Subcontractors _____

Est. Man hours _____ DBE/MBE/WBE: _____

CURRENT INSURANCE INFORMATION;

Contractors' Insurance Broker or Agent: PLEASE PRINT

Company Name: _____ Contact: _____

City/State/Zip: _____ Phone: (_____) _____

WORKERS' COMPENSATION

Current Experience Modifier: ____ (Provide documentation confirming)

W.C. Classification	W.C. Class Codes	Estimated Payroll
1.		
2.		
3.		
4.		

It is each Contractor's responsibility to notify its own insurance carrier to exclude all work to be done under this contract from your current insurance program. Any Contractors or Subcontractors who enrolls in the OCIP 30 days after their start date will have to provide a No Known Loss Letter to the Carrier along with the enrollment documentation.

Contractor warrants that the insurance costs for coverages provided by the Owner have been removed from the bid and no eligible Subcontractor has been charged by the Contractor for its participation in the OCIP. The OWNER, or their Agent, is granted permission by Contractors to inspect the insurance and payroll records. At completion of the Work, Owner's Agent shall have the right to audit the project payroll records of Contractors. Any and all returns of premiums, dividends, discounts or other

adjustments to any OCIP policy, including rights of cancellation, is assigned, transferred and set over absolutely to OWNER. This assignment is valid for insurance policies whose premiums have been paid by the OWNER on behalf of such Contractors.

Signed _____ Title _____ Date _____

Send this Form to:

Willis Towers Watson National Project Insurance Practice	Phone:	(972) 715-6219
Rebecca Trejo	Fax:	(972) 386-5561
15305 North Dallas Parkway, Suite 1100	E-Mail:	rebecca.trejo@willistowerswatson.com
Addison, TX 75001	cc:	becky.hubert@willistowerswatson.com

MSCAA OCIP IV
NOTICE OF ANTICIPATED COMPLETION
(to be submitted with Final Pay Request)

Willis Towers Watson National Project Insurance Practice Phone: (972) 715-6219
Rebecca Trejo Fax: (972) 386-5561
15305 North Dallas Parkway, Suite 1100 E-Mail: rebecca.trejo@willistowerswatson.com
Addison, TX 75001 cc: becky.hubert@willistowerswatson.com

Please be advised, we, _____ are scheduled to complete our work for:
Awarding Contractor: _____ Prime Contractor: _____
Project Description: _____ Actual Start Date: _____ Completion Date: _____
Reported Contract Value: _____ Final Contract Value: _____
Self Performed Work: _____ Subcontracted Work: _____
Estimated WC On Site Payroll: _____ Final WC On Site Payroll: _____

We used the following enrolled subcontractors, who will also complete their work on the date shown above:

<u>Subcontractors</u>	<u>Reported Contract Value</u>	<u>Final Contract Value</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

This is our contract: YES NO

We are still working on the following contracts:

<u>Location Code</u>	<u>Awarding Contractor</u>	<u>Prime Contractor</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Your Company's Name: _____
Date: _____
By: _____
Title _____

Final insurance audits may be made under the applicable policies. Please show who in your office (or another location if applicable) is responsible for this information:

Name: _____ Phone: _____ Fax: _____ E-Mail: _____
Address: _____ City: _____ State: _____ Zip _____



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Agent Company Name Address City, State ZIP Attn:	CONTACT NAME:	
	PHONE (A/C, No. Ext):	FAX (A/C, No):
INSURED OCIP Enrolled Contractor	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	NAIC#	
	INSURER A : AM BEST Rating A- VII or better	
	INSURER B :	
	INSURER C :	
INSURER D :		
INSURER E :		
INSURER F :		

COVERAGES

CERTIFICATE NUMBER: ✓

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY <i>Applies to Off Site Risks</i>	X	X				EACH OCCURRENCE	\$1,000,000
x	COMMERCIAL GENERAL LIABILITY						DAMAGES TO RENTED PREMISES(Ea occurrence)	\$
	CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person)	\$
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY	\$1,000,000
	POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/>						GENERAL AGGREGATE	\$2,000,000
							PRODUCTS-COMP/OP AGG	\$2,000,000
	AUTOMOBILE LIABILITY <i>Applies to Off and On Site Risks</i>	X	X				COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
x	ANY AUTO						BODILY INJURY(Per person)	\$
x	ALL OWNED AUTOS						BODILY INJURY(Per accident)	\$
x	HIRED AUTOS						PROPERTY DAMAGE (Per accident)	\$
	SCHEDULED AUTOS							\$
	NON-OWNED AUTOS							\$
X	UMBRELLA LIAB	X	X				EACH OCCURRENCE	\$1,000,000
	EXCESS LIAB						AGGREGATE	\$1,000,000
	DED							\$
	RETENTION \$							
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY <i>Applies to Off Site Risks</i>	N/A	X				X WC STATUTORY LIMITS	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)							
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. EACH ACCIDENT	\$1,000.00
							E.L. DISEASE - EA EMPLOYEE	\$1,000.00
							E.L. DISEASE - POLICY LIMIT	\$1,000.00
	OTHER							0

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Workers' Compensation and Commercial General Liability coverages shown above do not apply to any Designated Project at the Memphis International Airport – only for off-site activities/operations. The Memphis-Shelby County Airport Authority, its officers, commissioners, representatives, agents and employees ATIMA and [AWARDING CONTRACTOR] are additional insureds applicable to the Auto Liability Insurance and off-site Commercial General Liability insurance policies including Excess Umbrella. 30 Day Notice of Cancellation or Non-Renewal other than 10 days for non-payment of premium is provided to MSCAA. Waiver of Subrogation in favor of MSCAA is provided by all policies.

CERTIFICATE HOLDER

MSCAA OCIP
c/o Willis Towers Watson National Project Insurance Practice.
Attn: Rebecca Trejo
15305 North Dallas Parkway, Suite 1100
Addison, TX 75001

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

**EXHIBIT D
TO
LUMP SUM CONSTRUCTION CONTRACT
FOR
“A” BAGGAGE MAKEUP CAROUSEL REPLACEMENT – DESIGN/BUILD**

**BY AND BETWEEN
THE MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
(CONTRACTOR NAME)**

Construction Safety and Health Guidelines



Revision	Date
1	11/30/2012
2	05/02/2016
3	02/06/2017

Confirmation of these Project Safety & Health Guidelines

It is the responsibility of the Contractor to maintain total control of safety to ensure that employees and the general public are provided with an environment free of hazards during construction and renovation activities. This program does not relieve the Contractor of their responsibilities regarding the safety of their employees, the employees of their Subcontractors and sub-subcontractors, protection of the general public and the preservation of property.

Contractors shall develop their own written site-specific safety and health plans for the Memphis-Shelby County Airport Authority. At minimum, the safety and health plan shall meet the requirements of 29CFR1926 – Federal OSHA Construction regulations and the requirements established in the **Memphis-Shelby County Airport Authority** Construction Safety Guidelines. In short, as required by law, each Contractor is responsible for protecting the health and safety of its employees and the employees of each subcontractor and sub-subcontractor while ensuring they have a safe and healthful place to work. The site-specific safety and health program shall be submitted for approval within fifteen (15) days after the Notice to Proceed for approval to the Project Safety Manager, Wes Shelby, 4225 Airways Blvd., Memphis, TN.

The Safety Requirements of these safety guidelines are a supplementary document to all Government rules, codes, and regulations. It does not negate, abrogate, alter, or otherwise change any provisions of these rules, codes and/or regulations, and is intended to supplement and enforce the individual program of each contractor and the overall safety effort. It is understood that the ultimate responsibility for providing a safe place to work rests with each individual Contractor.

In the event of a conflict between the provisions of these guidelines and applicable local, State or Federal safety and health laws, regulations and/or standards, contract documents or the Contractor's Safety Plan the more stringent shall apply.

By Signature, each individual confirms their understanding of the contents of this manual and shall conform to the standards of safety outlined in this manual.

Contractor – Project Manager

Contractor – Field Supervisor

Date

Date

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POLICY STATEMENT

Memphis-Shelby County Airport Authority is committed that all construction workers have the best possible working environment while working on this project. It shall be the responsibility of each Contractor/Subcontractor to abide by the Safety and Health Provisions listed in OSHA 29 CFR 1926.

In addition, each Contractor, Subcontractor and Sub-Subcontractor shall abide by **Memphis-Shelby County Airport Authority** Construction Safety Guidelines, Federal Regulations, State laws and regulations, local and county laws and regulations which are applicable.

The primary goal established for the **Memphis-Shelby County Airport Authority** is to safely perform work with “**ZERO ACCIDENTS**”; totally free from lost time injuries for the mutual benefit of the worker, environment, and community.

The safety goals and objectives established for the Project can only be achieved when everyone commits to perform their tasks safely and efficiently. This commitment to achieve these goals will result in both increased productivity and the PREVENTION of job-related injuries and illnesses. This will be considered as safe construction.

Definitions

OCIP Team – Means the Owner **Memphis-Shelby County Airport Authority**, Willis Towers Watson and all applicable insurance carrier representatives or the representative of defined such agencies and firms working together to implement the OCIP insurance program.

Construction Managers – Means the Management Group or General Contractor that has direct contract with the Owner **Memphis-Shelby County Airport Authority** to provide the overall control of the construction at the project.

General Contractor – Means the Contractor that has direct contract with the owner or Construction Managers as bid for the project. The General Contractor is also the controlling contractor on the construction site when a Construction Manager is not present.

Subcontractor – Means the contractor and or contractors that carry contracts with the General Contractor or Construction Managers. Subcontractors bid portions of the scope of work to be completed.

Sub-Subcontractors – Means any subcontractors of a subcontractors working or contracted to do work on the project.

Critical Lift – A lift that exceeds 75% of the rated capacity of the crane or requires the use of more than one crane. Also, relates to the installation of equipment and or materials that are critical to the completion of the project and damage to such equipment and/or material could result in delays to the project.

The General Public – Is defined as all persons not employed by or under contract, subcontract or sub-subcontract to the **Memphis-Shelby County Airport Authority**.

PREFACE

From the inception of **Memphis-Shelby County Airport Authority** there has been a determination and commitment to provide a safe environment for all workers and for the public from hazards associated with the construction of the Project.

All Contractors shall implement measures that will create safety awareness, promote safe work practices at the job site and pursue the contract objectives in the safest possible manner. Each Contractor shall bear sole and exclusive responsibility for safety in all phases of their work. Nothing contained herein shall relieve such responsibility.

Each Contractor shall be responsible for all its subcontractors' and sub-subcontractors' compliance with the project safety requirements.

Contractors shall develop their own written site-specific safety and health plan for the MSCAA OCIP. At minimum,

the safety and health plan shall conform to the requirements addressed in the Occupational Safety and Health Act of 1970 and all additions and revisions thereto, and the requirements established in the **Memphis-Shelby County Airport Authority** Construction Safety Guidelines. In short, as required by law, each Contractor is responsible for protecting the health and safety of its employees while ensuring they have a safe and healthful place to work.

Contractor developed plans/program(s).

Programs will be reviewed and approved by OCIP Team. Example(s) of such OSHA mandated plans/programs are shown below.

- | | |
|------------------------------|------------------------------|
| Site Traffic Control Plan | Fall Protection Plan |
| Fire Protection Plan | Trench Safety Plan |
| Respiratory Protection Plan | Hazard Communication Program |
| Confined Space Entry | Scaffold Safety Program |
| Hearing Conservation Program | Ladder Safety Training |
| Dust Control Plan | |

Emergency Procedures shall be made part of the Contractor’s Safety Program. The following provisions shall be included in the emergency plan:

- a. Highest ranking supervisor automatically becomes responsible for the handling any emergency that occurs during his working hours; they may call upon the assistance of any available worker. A responsible supervisor must be designated for each shift.
- b. On a regular basis, at both supervisory and “weekly toolbox meetings” instruct and update all employees in any course of action for emergencies.
- c. Establish teams to handle each of the various emergencies.
- d. Following an emergency, ranking personnel shall secure the area as expediently as possible and provide access and an account of the emergency to authorized representative(s) of MSCAA. Questions from the media should be referred to MSCAA.

Emergency procedures that may occur during any 24-hour period in the following categories must be established by each contractor:

- a. Fire
- b. Employee injury
- c. Pedestrian injury due to work activity of any kind
- d. Property damage and damage to above ground and buried utilities
- e. Public demonstrations
- f. Bomb threats

On a regular basis, the Contractor shall review and, when necessary, update Emergency Procedures for maximum effectiveness. The contractor should provide MSCAA, the Construction manager, and the on-site safety rep a telephone list of key management personnel, for after-hours emergency contact.

Should a serious accident or emergency occur, the contractor shall contact the Construction Manager immediately. If an emergency requires the presence of an ambulance or the Fire Department, including nights, weekends and holidays, the contractor shall call MSCAA emergency dispatch at (901)922-8333. Non injury accidents need to be reported to the airport police at (901)922-8298. **DO USE 911**

Site Access

- 1. **Use only designated haul routes/crossings.**
- 2. **Stay in assigned work area as identified on plans and as defined by fences and barricades. Barricades/fences must not be crossed.**
- 3. **Instructions from guards and escort personnel must be obeyed.**

Contractors, Subcontractors, and Sub-Subcontractors will be monitored for implementation and application of their respective safety programs at the work site. Members of the OCIP Team shall have the authority to stop work when either site conditions and/or work practices present an imminent danger until those conditions and/or practices are corrected. Contractors will be notified of any non-compliance and corrective action required. This notice, when delivered to the

contractor or their representative at the site of the work, shall be deemed sufficient notice of non-compliance and corrective action required. After receiving the notice, the contractor shall immediately take corrective action. If the contractor fails or refuses to take corrective action promptly, a stop work order may be issued. The cost to bring the work activity into compliance shall be incurred by the Contractor, Subcontractor or Sub-subcontractor. The Contractor, Subcontractor or Sub-Subcontractor shall not submit a request for extension of time or increased costs as a result of any such stop work order. Members of the OCIP Team shall not be liable for any damages experienced by the Contractor due to the work stoppage. Progress payments may also cease until the Contractor and/or its Subcontractor and Sub-Subcontractors is in full compliance with all applicable safety and health rules, standards, and regulations.

Each Contractor and their subcontractors and sub-subcontractors shall establish and enforce an effective disciplinary program (Appendix B). Contractors shall discipline and/or dismiss employees who violate established rules and regulations. This includes immediate termination for serious violations, repeated violations, or the refusal to follow safety and health rules.

OCIP Team members shall have the authority to effectively remove from the site, any person (employees including supervisors and management of any contractor) who is regarded as a frequent violator of safe work practices, or who fails to ensure persons working under their supervision or in a work place they control are not exposed to serious work hazards. Any Competent Person assigned to identify existing and predictable hazards and authorized to eliminate them, which fails to perform this duty for any reason shall be replaced by the employer.

The Contractor shall not receive additional payment or reimbursement for safety items and procedures which have been identified as required by the Project Safety and Health Guidelines.

Failure to comply with the contract safety requirements will be considered as non-compliance with the contract and may result in remedial action including withholding of progress payments due the Contractor and/or termination of the Contractor from the site.

In the event the work or any portion thereof is shut down by either an outside agency or because of an unsafe condition as determined by the OCIP Team, the responsible Contractor shall bear the total cost caused by that shut down.

In no case shall the Contractor be relieved of overall responsibility for compliance with the requirements of federal, state, and local safety and health laws for all work to be performed under the contract

For any construction equipment working near operating right of way and in aircraft safety areas that could encroach into MSCAA's operating right of way and aircraft safety areas shall submit to MSCAA (and obtain approval from the MSCAA) a plan describing the use of such equipment, and the necessary precautions to be taken to preclude any accidental encroachment unto the right of way or aircraft safety area.

INTRODUCTION

Construction Safety and Health Guidelines, Purpose and Scope

These guidelines are established to aid in the prevention of job-related accidents and health problems during the construction of the **Memphis-Shelby County Airport Authority**. These guidelines set forth elements which all Contractors, subcontractors and sub-subcontractors shall include in their safety plan. This manual is not all-inclusive. Other elements may be added or conveyed individually to Contractors to whom they expressly apply. There are other essentials which some Contractors, by nature of the specific type of work being performed, must integrate within their own safety plan.

These guidelines set forth basic rules and regulations for all personnel involved in the construction of the Project. The intent of these guidelines is to enhance and supplement the safety and health standards which are required by law, in contract documents, and are applicable to the construction projects for which it is applied. These guidelines do not cover the full spectrum of published safety and health standards mandated by law, and Contractors shall not assume that they are responsible only for those which are referenced in this manual, nor that they are current and quoted as published. It is the responsibility of the Contractor and its employees to ensure that they are in compliance and their safety plan is in compliance with all safety directives required by law.

In the event of a conflict between the provisions of these guidelines and applicable local, State or Federal safety and health laws, regulations and/or standards, contract documents or the Contractor's Safety Plan the more stringent shall apply.

RESPONSIBILITIES

General

Each participant involved in the construction of the Project is individually responsible for conducting their activities to ensure compliance with all applicable safety and health requirements. Construction activities of the Contractor and their Subcontractors and sub-subcontractors will be monitored for compliance with FAA, MSCAA, Federal, State, County, and local safety and health regulations and contract safety and health requirements.

Contractors

The Contractor shall be responsible for the safety and health of employees, subcontractors, sub-subcontractors, visitors, and vendors in accordance with State, Local and Federal regulations, and the Contract Documents. Each Contractor shall establish and submit for review a written Safety and Health Plan which includes details commensurate with the work to be performed. The Contractor's Safety and Health Plan shall clearly describe the contractor's commitments for meeting its obligations to provide a safe and healthful work environment for its employees and subcontractor employees, to protect vendors, visitors, and members of the general public. The Contractor's Safety and Health Plan shall reference Federal OSHA standards, and any other rules or regulations applicable to construction activities.

Each Contractor shall designate an on-site Safety Representative who is charged with the responsibility of on-site safety management. The Safety Representative's sole duty shall be safety management and shall not have other collateral duties. At minimum the safety representative shall meet the requirements of a "competent person" as defined by OSHA for all phases of construction and have a minimum of three (3) years construction safety experience. A resume shall be provided that outlines such items as: work experience, education, training completed and professional organizations, etc. The safety representative shall remain on the Project until contract acceptance (full-term of contract). Safety representative must be knowledgeable on SC-230, SC-240, and other safety requirements as outlined in GP-200, the safety plan and site safety manual. The safety representative shall be interview by the OCIP Team.

As a condition of this contract, a safety improvement team shall be established for this project. The following guidelines (Appendix H) shall be followed.

As a condition of their contract, all Contractors shall submit to the Project Safety Manager or designee:

- A site-specific safety plan within fifteen (15) days after receipt of Notice to proceed and prior to start of any construction activities.
- The name and qualifications (resume) of designated on-site safety person;
- An immediate copy of all citations and/or warning of safety violations received from any state or federal jurisdiction, agency, insurance company, or by any of its subtier contractor.

The Contractor shall:

- Ensure that all employees, subcontractors' and sub-subcontractors' employees are given a comprehensive Safety and Health orientation. This orientation shall include general Safety and Health procedures and policies as well as the project specific rules, regulations, and specific hazards. Employees shall be advised that disregard for these rules, or any other applicable Safety and Health regulations shall be subject to company disciplinary action and/or removal from the project. All workers shall complete an acknowledgment that indicates the worker has read, understood, and will abide by the rules and regulations. The following information shall be obtained from all employees: worker's name, date of orientation, Contractor's name, and project name (Appendix A).
- Investigate all accidents and incidents that result in personal injury or illness to workers, damage to buildings or equipment and any incident with the general public.
- Conduct daily job inspections, identify unsafe conditions, or work practices and assure they are corrected, and maintain documentation.
- Conduct weekly, documented, safety meetings with Contractor supervisory personnel.
- Attend monthly Safety committee meetings and participate
- Assure that employees acting in a supervisory capacity understand and enforce all safe work practices. **Foreman and supervisors are required to have completed a 10-hour OSHA Outreach hazard recognition course within Two (2) years prior to directing work on the project.** Documentation must be made available for review

- Assure that employees acting in a supervisory capacity understand and enforce all safe work practices. **Foreman and supervisors are required to have completed a 10-hour OSHA Outreach hazard recognition course within Two (2) years prior to directing work on the project.** Documentation must be made available for review.
- Assure a Competent Person is provided at work locations where required by OSHA.
- Assure that all Personal Protective Equipment (PPE) is available and being used as required.
- Assure all construction equipment and motor vehicles certification, inspection, repair, and controls are in compliance with the safety requirements of the project and OSHA. Annual crane certification shall be available for review for each to a crane on the project.
- Prior to making critical crane lift, detailed lift plan shall be submitted. (See Appendix C, "Critical Lift Checklist")
- Assure that all hand and power tools are in safe working order.
- Assure that all work areas are kept clear of debris and trash and that adequate trash barrels are placed throughout the work area and emptied frequently.
- Provide the appropriate number and types of sanitary facilities for employees.
- Assure that fall protection equipment is provided and used. Inspections of this equipment shall be documented and on file for review.
- Assure that all perimeter cables, barricades, or any other safety-related items are installed correctly and maintained. If another Contractor must remove a safety item, coordinate this activity with the Contractor who installed the device and other Contractors who may be exposed. **Safety devices shall be replaced by the Contractor removing them.** Warning signs, tags, or barricades shall be installed if other safety devices are removed.
- Assure that employees receive adequate training as required by the Project and OSHA. Additional training for foreman and safety representative may be required based on unique hazards involved in a task.

WORKPLACE SUBSTANCE ABUSE POLICY

The contractor shall submit as a part of their overall Safety and Health Plan a copy of their company Workplace Substance Abuse policy. This policy shall at minimum comply with Appendix D, "Substance Abuse".

The Contractor shall ensure that all subcontractors and sub-subcontractors are in compliance. The Contractor shall submit a monthly notarized letter stating they and their subcontractors are in compliance with the Project's Substance Abuse Policy.

Contractors should contact the State of Tennessee, at 1-800-332-2667, if there are questions concerning the Tennessee Drug Free Workplace Program. Contractors should also consult their own legal counsel.

INSTRUCTION AND TRAINING

Safety Orientation Program

Newly employed, promoted, and/or transferred personnel shall receive an orientation regarding the general safety and health rules and regulations as well as the site-specific policies and hazards prior to starting work on the construction site. The Contractor shall be responsible for the orientation of their employees, Subcontractors and sub-subcontractors, and visitors. Documentation of this orientation shall be maintained on file for review (Appendix A). Hard hat stickers (provided by the Project) are to be issued to an employee following their orientation, and then documented on training Log Sheet. It is the responsibility of the contractor to ensure that non-English speaking employees receive these same instructions in a language they understand. Safety orientation of all personnel shall include at a minimum the following topics Safety orientation of all personnel shall include at a minimum the following topics:

- Unique hazards of the project
- Employer/personnel responsibilities under OSHA Standards – location of required posters
- Personal protective equipment, including appropriate work attire
- Confined space entry
- 6-Foot fall rule - 100% continuous fall protection (***including steel erection and scaffolds***)
- 100% eye protection, 100% hard hat protection
- Appropriate guarding and other warning devices
- Housekeeping
- Fire protection
- Accident reporting procedures - First-aid facilities - Emergency procedures

- Crane and lifting hazards
- Scaffolding tagging requirements
- Hazard communication/ Right-to-Know, location of MSDS's
- Substance abuse policy
- Disciplinary procedures
- Trenching & excavation
- Electrical hazards

PROTECTION OF THE PUBLIC

All necessary precautions to prevent injury to the public or damage to property of others shall be taken. The "Public" is defined as all persons not employed by or under contractor or subcontractor to **Memphis-Shelby County Airport Authority**. Installation of temporary barriers and/or fencing designated to protect the Public shall be reviewed and approved by the Owner and/or their representative. Precautions shall include but not be limited to the following:

1. Work shall not be performed in any area occupied by the Public unless specifically permitted according to the terms of the contract or in writing.
2. When necessary to maintain public use of work areas involving vehicular roadways, etc., the contractor shall protect the Public in accordance with the applicable regulations.
3. Appropriate warnings, signs and instructional safety signs shall be conspicuously posted where necessary. In addition, a signal person shall control the moving of motorized equipment in areas where the public might be endangered. All signage warnings and traffic control shall comply with the particular agency that takes judicial precedence.
4. Each project work area shall be protected by a fence constructed and erected per MSCAA requirements.
5. Barricades for the general public or public roadways shall be secured against accidental displacement and in place at all times, except when temporary removal is required. As such times, a flag person shall be assigned to control the unprotected area. Barricades used on the airfield will be reconstructed erected and maintained per MSCAA/FAA requirements.
6. Required signs and symbols shall be visible at all times when work is being performed and shall be removed or covered promptly when the hazards no longer exist.

Group Tours and Site Visitors

It is particularly important that a high degree of protection be afforded to all persons on the authorized tours of construction worksites. The following instructions shall be complied with, as applicable, by the Contractor and those responsible for arranging such tours. The following procedures shall be followed:

- a) Group tours shall be cleared through the site **Memphis-Shelby County Airport Authority** office, allowing maximum advance notice.
- b) If visitors to the site will be on foot or out of the vehicle/bus, the individual or organization requesting the tour shall ensure that:
 - In all cases, the Construction Manager, MSCAA and the contractor shall be advised of any tour in a timely manner prior to the tour taking place.
 - Release and Hold Harmless Agreement – Each visitor shall be required to sign a release and hold harmless agreement prior to the commencement of the tour.
 - MSCAA will coordinate the tour arrangements and ensure notification to the Construction Manager
 - Tour groups are limited to no more than (25) twenty-five persons.
 - Visitors are required to wear appropriate clothing and shoes.
 - Children under 18 years of age are not permitted on the Project tours.
 - All visitors shall comply with Contractor safety requirements.
 - Site **Memphis-Shelby County Airport Authority** or designee personnel will escort Tours.

HARASSMENT-FREE WORK POLICY

Employee Harassment

It is the policy of **Memphis-Shelby County Airport Authority** to provide a workplace free from employee harassment on the basis of race, color, religion, sex, national origin, age, handicap, disability, etc. Improper interference with the ability of an employee to perform their work activities will not be tolerated. Harassment can appear in many forms, including derogatory comments, jokes, slurs, unwanted physical contact, derogatory drawings, or threats.

Sexual Harassment

Unwanted sexual advances, requests for sexual favors and other verbal physical conduct of a sexual nature will not be tolerated. Sexual harassing conduct includes, but is not limited to:

- Unwelcome sexual flirtation, touching, advances or propositions
- Verbal abuse of a sexual nature, including graphic or suggestive comments about an individual's dress or degrading words used to describe and individual
- The display in the workplace of sexually suggestive objects or pictures, including nude photographs
- Other verbal or physical conduct of a sexual nature can affect an employee's work performance

Reporting of Harassment

It is the policy of **Memphis-Shelby County Airport Authority** to actively investigate any alleged incidence of harassment. Anyone who believes they have been harassed should contact the project manager. Any allegation or complaint will be held in the strictest confidence.

Any employee who commits a wrongful act of harassment shall be subject to disciplinary action, up to and including termination.

REPORTING, ACCIDENT INVESTIGATION, AND RECORDKEEPING

Contractors shall provide an American Red Cross and CPR Certified First Aid representative and designate an appropriate area for the first aid and medical care to treat injured employees at the job site. A copy of the First Aid Representative's qualifications shall be submitted to the Project Safety Manager.

The contractor must designate an individual to coordinate injury treatment with the workers' compensation carrier. The contractors' designated representative should also coordinate return to work and availability of modified work.

To coordinate medical services, the contractor will complete "Employee Medical Data Sheet" and "Company Drug Screen Request: forms.

Reporting

All accidents resulting in employee injury, property damage, or involving the general public shall be reported immediately to the designated project representative and the Project Safety Manager.

The Contractor and their subcontractors and sub-subcontractors shall complete a Supervisor's Incident Report Form (See Appendix E) and submit the report to the Project Safety Manager for all job-related accidents involving any of the following:

1. Any employee injury of the contractor, any subcontractor or sub-subcontractor.
2. Any injury and/or incident with the general public (including any alleged injuries reported by a member of the general public).
3. Equipment
4. Property

A formal accident investigation report and "First Report of Injury" shall be submitted within 24 hours. Pertinent facts that are not available within the above time shall be submitted as soon as available in a supplemental report.

A drug and alcohol test shall be administered to employee(s) injured and/or any employees in a work crew involved in an accident involving bodily injury.

Record-Keeping and Files

The Contractor and all Subcontractors and sub-subcontractors shall maintain a master or central file for safety and health related documentation on the jobsite. Files shall be maintained in such a manner that distinguishes each contractor and their subcontractors from other subcontractors and sub-subcontractors.

See Insurance manual for claim reporting procedures.

Accident Investigation

All accident/incidents shall be investigated by the contractor's safety supervisor and/or their safety designee. An accident investigation report must be submitted to the Designated Project Representative, OCIP Administrator/Willis Towers Watson and OCIP Insurance Carrier within twenty-four (24) hours of the occurrence.

The accident investigation should generate appropriate recommendations for corrective actions to prevent recurrence of similar accidents. Depending upon severity of the accident, the foreman of the injured worker may be requested to appear at the job safety and coordination meeting to:

1. Describe the cause of accident.
2. Report as to what corrective action has been initiated to avoid future accidents.

The Contractor and all Subcontractors shall maintain a current OSHA 300 log. The log shall be available for review by any OCIP team member at any time.

The Contractor and all Subcontractors and Sub-Subcontractors shall submit on a monthly basis a monthly summary of accident/incidents for the project. The summary shall follow the format contained within (Appendix G).

Under the direction of MSCAA AD HOC Committee may be appointed for investigation of serious accidents that result in loss of life, injury to several workers on pedestrians or major property loss. The committee will submit a report to MSCAA at the conclusion of the investigation.

RETURN-TO-WORK

Under the OCIP Program, every effort shall be made to **return employees to work as soon as possible** after an accident and under the direction of the physician. The insurance carrier will be in contact with the physician to determine the employee's physical demands and limitations.

A return-to-work program shall be developed and implemented by each Contractor to assist workers who are temporarily disabled due to an injury or illness. The Contractor and all subcontractors shall participate in the return-to-work program.

The Contractor, Subcontractor or Sub-subcontractor shall agree that their injured employees shall be treated by an authorized medical treating facility. The medical facility shall be utilized for initial treatment and evaluation of all injured employees. Follow-up care will be provided in accordance with applicable Workers' Compensation statutes.

When employees report a work-related illness or injury, they shall be taken to the approved medical facility for examination and/or treatment. If the doctor determines that the employee qualifies for "Return to Work" ("light-duty"), the doctor will complete appropriate forms indicating the restrictions and conditions for transitional work.

The Contractor, Subcontractor or Sub-subcontractor shall provide modified work until the employee is able to resume regular duties. All modified work is temporary in nature and is designed to facilitate a return to regular duties as soon as possible. Modified duty positions may be offered at any location of the project or on any shift. Modified work can also be provided at other work locations of the Contractor with approval from the OCIP Team.

In no case shall an injured employee be laid-off or terminated from a "alternative work" position, unless first discussed with the Owner and it's representatives.

WORK PRACTICE CONTROL

Overview

The primary focus of these Safety and Health Guidelines is to provide guidance for Contractors. Each Contractor shall have on site and available for employee review a written safety and health plan. This plan shall cover work exposures the contractors' work operations. It is a project requirement that each and every employee conduct their operations in accordance with OSHA and all other applicable standards for all project operations

Memphis-Shelby County Airport Authority prohibits the use, possession, concealment, transportation, promotion, or sale of the following controlled items:

- a. Firearms, weapons, and ammunition – except when authorized for security reasons.
- b. Switchblades.
- c. Unauthorized explosives, including fireworks.
- d. Stolen or contraband.

Hazard Communication Program

The Contractor shall develop a written Hazard Communication Program that contains at minimum the following elements:

- The name of the program coordinator.
- A list of hazardous substances present within the Contractor's workplace.
- A written system that ensures MSDS's are obtained and made readily accessible to all employees, including lower tier subcontractor personnel, on each shift. In the event of an emergency, MSDS's shall be made available on an immediate basis.
- A labeling program that ensures that containers of hazardous substances in the workplace are properly labeled with the name of the substance and any applicable hazard warnings.
- A training program regarding hazards of substances that are used in the workplace and the protective measures that must be taken by the employee or any other persons potentially exposed to the hazardous substances.

The Contractor shall ensure that each employee, prior to working with, or being potentially exposed to hazardous substances, receives initial training on the Hazard Communication Program and the safe use of the hazardous substances. Additional training shall be provided to employees whenever new substances are introduced to the workplace.

Permanent records shall be maintained by the Contractor, describing all Hazard Communication Program training.

Record-Keeping and Files

The Contractor and all Subcontractors and sub-subcontractors shall maintain a master or central file for safety and health related documentation on the jobsite. Files shall be maintained in such a manner that distinguishes each contractor and their subcontractors from other subcontractors and sub-subcontractors.

Contractors shall submit and/or have available on site:

REPORT NAME	Annual	Immediately	24 Hr.	Weekly ¹	Monthly ²	Per Occurrence	Per Request
Annual Crane Inspection	X						X
Chemical Inventory					X		X
Contractor Weekly Inspection				X			X
Critical Lift Checklist						X	X
First Report of Injury		X				X	
Incident Investigation		X				X	
MSDS's					X		X
OSHA 300 Log					X		X
OSHA Citations		X				X	
Safety Observation				X			
Safety Plan of Action or JSA ³				X		X	X

Safety Statistics					X		X
Safety Training					X		X
Substance Abuse Policy compliance notarized letter					X		X
Toolbox Safety Meetings				X			X
Daily equipment / Vehicle Inspections							X

Daily -- Daily inspections are required on all equipment / vehicles.

¹ Weekly – Weekly reports are due the following Tuesday morning

² Monthly – Monthly reports are due by the 6th of the following month.

³ Safety Action Plan or JSA – As required by contract or specification

The Owner and it's Representatives shall have the right to review all documentation at any time upon request. The Contractor shall give full cooperation during these reviews.

The following documentation shall be in the safety files:

- A written project site specific Safety & Health Plan
- Hazard Communication Program, including current MSDS's. A project specific MSDS file shall be maintained on-site for employee review
- Site emergency plans
- All required safety & health permits
- Weekly safety meeting reports - including meeting topic(s) and employee attendance sheets
- Specific job hazard worker training
- Daily jobsite safety inspection reports - including documentation of corrective measures
- Equipment inspection reports
- Crane inspection reports - daily and monthly (annual certification reports required prior to equipment operation)
- Employee orientation training records
- Accident investigation reports, including near-misses
- Job hazard analysis
- Competent person qualifications
- Written safety violations
- Noise and air quality monitoring

Job Safety Analysis (JSA)

In order to provide Contractor employees with a safe workplace through pre-planning hazardous work, a Job Safety Analysis (JSA) shall be prepared. JSA's shall be required when thorough pre-job planning, it is determined that the process, equipment, or procedure indicates potential for serious injury and/or property damage. The Contractor shall also prepare a JSA upon request by an OCIP Team member. JSA's will be done daily. JSA's should be kept in the work area, possibly at the toolbox and/or where they are readily available to the workers. JSA's will also be on file with the contractor.

The JSA shall be used by Contractors to analyze the jobs they perform, to identify the existing and potential hazards associated with each job step and establish controls for them. These JSA's shall be used as a task specific training tool to instruct employees, inspectors, and visitors of potential hazards and required safety precautions. Each employee working on the project shall sign a training log indicating that they understand the hazards of the project as indicated on the JSA.

Examples of activities that may require a JSA:

- Potential for collapse, (work-in trenching, tunneling. This may include demolition, etc).
- Potential release of stored energy, (electrical, pressure, explosive, etc).
- Crane supported work plate form use.
- Critical crane lifts (two cranes used to lift one load).
- Unusual crane operation as defined by the CIP Team.
- Potential exposure to uncontrolled hazardous materials or wastes.
- Blasting operations
- Abrasive /Sandblasting, Hydro blasting, etc.
- Potential injury from burns, both chemical and thermal.
- Respirator use.

- Potential oxygen-deficient environments.
- Entry into confined space.
- Potential of entanglement in, on, or between objects.
- Work in public streets and highways.
- Lockout/Tagout.
- Operations involving fall exposure.
- Structural Steel Erection.
- Use of new or Hazardous Materials, procedures, equipment.
- Material Storage & Handling.
- Powder actuated tool use.
- Suspended scaffolds.
- Scaffold erection.
- Scaffold dismantlement
- Rock drilling.
- Work on live electrical systems.

SPECIFIC PROJECT SAFETY REQUIREMENTS

Controls for possible conflicts between construction operations and aircraft

- 1) Contractor must request that a notice to Airmen (NOTAM) be issued prior to start of any construction that might affect navigable airspace or surface movement.
- 2) Barricades and temporary lighting must be installed and maintained per specs.
- 3) Operators of equipment/vehicles must be instructed on routes and haul procedures.
- 4) All personnel must stay in defined work areas. Fences/barricades are not to be crossed.
- 5) No access to active taxiways/runways will be allowed without prior authorization and direction/escort by MSCAA personnel.

Scaffolds, Stair Towers and Work Platforms

The Project requires **100% continuous fall protection** during the erection and dismantling of scaffolds where employees may be exposed to a fall greater than (6) six feet. A competent person must be present during erection, dismantling or moving of scaffold. The Contractor/Subcontractor shall develop and use a scaffold tagging system similar to the following:

Tagging

The tagging procedure, at minimum, shall consist of three (3) tags. The appropriate tag will be placed on a scaffold approved by the competent person. Each tag must have at least the following information and be visible by all employees:

- Date tag was placed - date of the last inspection.
- Name of person inspecting. All tags must be weather resistant.

A **GREEN** tag means the scaffold complies with federal OSHA regulations and can be used by any person.

A **YELLOW** tag indicates the scaffold is complete but does not meet all federal OSHA specifications. This tag will be used only in special circumstances. Special precautions, such as wearing a safety harness may be required because any accessory, such as a handrail, could not be installed due to the location of the scaffold.

A **RED** tag shall be placed on a scaffold that is being erected, dismantled, damaged and/or defective. No employees except members of the erection/dismantling crew shall work from a red tagged scaffold.

Employees will be instructed to read tags before using scaffolds. If a tag is not attached to the scaffold, **DO NOT USE** the scaffold.

Exceptions: Single buck or Baker scaffolds need not be tagged.

Walking and Working Surfaces

Barrier Identification Tape

Barrier identification tape is strictly prohibited from being used for any form of personnel fall protection. Barricade tape around excavations can be used for short term (24-hours), after this period physical barriers are required.

- **YELLOW** barricade tape shall be used for **CAUTION/WARNING**
- **RED** barricade tape shall be used for **DANGER DO NOT ENTER**

Note: Once the area barricaded is free of the hazard(s) for which it was erected the tape will be removed and properly discarded.

Fall Protection

Employees shall not be exposed to fall hazards. When an employee observes a fall hazard, they will notify their supervisor of the hazard. The responsible Contractor will immediately correct the hazard. **100% continuous fall protection, for fall hazards greater than six (6') feet, shall be implemented on this Project - including steel erection and scaffold use, erection and dismantling.**

Each Contractor shall be responsible for meeting fall protection requirements in their overall safety and health program.

Each Contractor shall evaluate ALL fall exposure conditions or tasks and must develop a Fall Protection Plan which outlines what methods, procedures and/or devices will be used in their program.

Each Contractor shall be responsible for implementing the requirements to achieve fall protection in accordance with all Federal, State, local rules, regulations, and the OCIP Safety and Health Guideline.

All fall protection systems used on this project shall comply with OSHA regulations and the project safety guidelines. Fall protection shall provide a positive means of protection. **Controlled Access Zones and Safety Monitoring Systems are not considered positive means of fall protection and shall not be permitted.** Any employee exposed to a fall greater than six (6) feet shall use approved fall protection equipment or devices. Fall protection systems shall be designed and installed under the direction of a Registered Professional Engineer or Qualified Person. Fall protection is required, as a minimum, under the following examples:

- Formwork and reinforcing steel. Each employee on the face of formwork or reinforcing steel shall be protected from falling 6 feet or more to lower levels by Personal Fall Arrest Systems, safety net systems, or positioning device systems.
- When working from a telescoping, articulating, or rotating type lifts and scissors lifts, personnel shall wear a safety harness with shock absorbing lanyard, secured to an approved anchorage point.
- When working on a ladder higher than six (6) feet from a solid surface, if the employee's torso extends past the side rails or if a vertical ladder extended a total of 20' or greater.
- When working on a platform or other support not equipped with an adequate guardrail, which is higher than six (6) feet from a solid surface.
- When working from a crane-suspended work platform, a safety harness with shock absorbing lanyard is mandatory.
- When an employee may have to be lowered into or raised from a confined space, a personal fall arrest system will be worn. The employee will be supported by an approved platform or a boatswain's chair, with certified hoisting device and fall arrest device.
- When working adjacent to an unguarded floor opening or sloped roof, a lifeline system is desirable for mobility. A positive means of fall protection must be provided unless it can be proven infeasible.
- When working adjacent to a deep excavation, pit or trench. Employees will be instructed on the proper wearing and use of personal Fall Protection Arresting Device Systems.
- **Barricade tape is not adequate fall protection.**

The Fall Protection Plan shall detail in writing when fall protection is required and exactly how this protection is to be provided. This written plan is required for any Contractor exposing workers to falls six (6) feet or greater.

The Contractor shall prepare a written training program to ensure that each employee who might be exposed to fall hazards is knowledgeable of the Fall Protection Plan requirements. The program shall enable each employee the ability to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to eliminate or minimize these

hazards.

The Contractor shall assure that each employee has been trained.

Personnel, who have been trained, then re-trained and continue to violate the established fall protection plan/regulations shall be removed from the project IMMEDIATELY.

Confined Space Entry

All employees required to enter a confined space shall be knowledgeable of the hazards involved with confined space entry. Prior to the start of such an entry the Contractor involved in the work will develop a Confined Space Entry Procedure. The Contractor shall train all personnel who will enter the confined space. No one shall enter a confined space area until properly instructed. Contractors shall identify all confined spaces within their work area with a sign identifying the area as a confined space.

A Confined Space Entry procedure shall be used to:

- Prevent inadvertent operation of equipment and/or work process while people are working in the confined space.
- Eliminate unexpected exposure to hazardous materials, oxygen deficient or inert/toxic gaseous atmosphere while working in confined spaces.
- Plan for a timely and effective response to an emergency during a confined space entry.

Confined Spaces are considered to be areas with limited entry and exit, or poor natural ventilation, and not intended for human occupancy. Examples of a confined space include: tanks, covered basins, vaults, columns, mixers, manholes, pipelines, sumps, ditches or excavations. All spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise.

Safety considerations include but are not limited to: atmosphere testing for gaseous conditions/lack of oxygen, appropriate personal protective and emergency equipment, and additional personnel as needed to assure communications and assist the individual conducting the entry.

A Permit Required Confined Space means confined space that has one or more of the following:

- May or may not potentially contain a hazardous atmosphere;
- Contains a material that has potential for engulfing entrant;
- Has internal configuration that could trap the entrant;
- Contains any other recognized serious health or safety hazard;

Contractors shall provide their own permit.

A Non-Permit Required Confined Space is a confined space that does not contain or with respect to atmospheric hazards, the potential of causing death or serious physical harm.

Employee Ground Transportation

The purpose of this section is to establish minimum acceptable guidelines for the safe transportation of all personnel traveling within the Project confines. Eliminate personal accidents and injuries resulting from improper equipment use.

Contractors are responsible for assuring that all personnel follow the requirements of this section and prohibit improper transportation of employees and visitors. Transporting employees in cargo beds of pick-ups, vans, etc. is prohibited, unless approved seats and seat belts are provided and used.

- Operators must be qualified. Vehicle operators must have valid state operator's license
- All equipment/vehicles must be identified (company logo) per specifications.
- Safe speed must be maintained and adjusted to site conditions.
- Use flashers/headlamps as directed.
- Mobile cranes, forklifts, winch trucks, front-end loaders, tractors and other materials handling equipment are not permitted to transport passengers.
- Trucks

- A maximum of three passengers are permitted to ride inside of the truck cab unless the cab is specifically designed to accommodate additional passengers.
- Passengers shall ride with all portions of their bodies inside the truck body or frame.
- Passengers shall be in the seated position, with the seat belts secured and adjusted properly, before the vehicle is set in motion.
- Riding on a vehicle's bumper or tailgate is prohibited.
- Tailgates will be closed and latched before the vehicle is operated.
- Passengers are not permitted to ride in the body of a dump truck, in the bed of a pickup truck or in trailers.
- Passengers are not permitted to ride on top of the load or to hold materials from shifting.
- Vehicles must be designed to accommodate passenger transportation, or the vehicle shall not be used for that purpose.
- Drivers transporting passengers shall follow the posted speed limit and Project traffic rules.
- The Contractor shall establish a designated employee parking area. Employee vehicles shall not be allowed on the construction project.

Housekeeping - MUST BE A CONTINUING PROCESS

The purpose of this section is to incorporate into the day-to-day work activity a good housekeeping action plan that will be followed by all Contractors working on the project.

- Contractors, through inspection and example, are responsible for assuring that trash and debris remain out of the work areas. Contractors are responsible for all their work areas and the work areas of their subcontractors and sub-subcontractors. If poor housekeeping practices are observed, corrective action will be discussed with the appropriate Contractor to remind them that cluttered work areas will not be tolerated and that their work area(s) pose a hazard to his employees and other personnel.
- Should the Contractor fail to address and correct their poor housekeeping upon 24 hour written notification, the "owner" may at its option, cause the same to be removed and charge the expense of such removal to the appropriate Contractor.
- Specific attention is needed for operations to the Aircraft Operation Area (AOA).
- Contractors shall monitor their work areas daily or more frequently if needed to assure that all debris is removed to minimize hazards.
- Immediately available vacuum sweeper for cleaning taxiway/runway crossings.
- Personnel immediately available for taxiway and runway cleanup. (Provide brooms to supplement cleanup by sweeper.)
- Access to taxiway/runway crossings for cleanup only at the direction of MSCAA guard.
- Loading of haulage vehicles to minimize spillage.
- Maintenance of vehicles/equipment so that no fluids will leak.
- Provide waste containers at the direction of the Construction Manager.

Project Electrical Requirements

- The Contractor shall implement an electrical safety program. This safety program element shall include safe installation, work practices, maintenance, and special equipment considerations. All electrical installations, either temporary or permanent, shall be in conformance with the National Electrical Safety Code, NFPA-70, ANSI-C1, and low and high voltage electrical safety orders OSHA code requirements. Only qualified employees shall install electrical tools and equipment, defective and/or improperly installed equipment shall be repaired immediately.
- Only qualified electricians familiar with code requirements shall be allowed to perform electrical work.
- Extension cords used with portable electrical tools and appliances shall be heavy duty (minimum 12 AWG) and of the three-wire type. Cords shall be covered, elevated, or otherwise protected from damage that would create a hazard to construction site personnel.
- Electrical cords and equipment shall be visually inspected before each shift for external defects. All damaged and defective cords shall be removed from service immediately (this includes cords with the ground prong missing). Cords shall be repaired with approved heat-shrink methods, electrical tape is not permitted.
- All temporary electrical tools, cords and equipment shall be properly protected by ground fault circuit interrupters (GFCI). All portable generators shall have properly functioning GFCI outlets. GFCI receptacles shall be tested monthly with a multi-range GFCI tester (the tests shall be documented) to insure the GFCI is properly functioning and protecting the worker.
- A "task-specific" lockout/tagout safety plan shall be established to ensure power sources to equipment and/or machinery are isolated and de-energized. This plan shall establish minimum steps necessary to disable equipment and machinery

to prevent the unexpected release of potentially hazardous energy. Lockout/Tagout shall be performed in accordance with 29 CFR 1910.147.

Cranes and Hoisting Equipment

- Cranes and hoists shall not be used without a current annual certificate of examination and testing issued by an accredited crane examiner. **Annual inspection certificates shall be available when cranes arrive on-site. Operators' manual shall be in the cab of each crane prior to crane operation.**
- Only qualified and designated personnel shall operate cranes or hoisting equipment. Crane operators must have current (Certified Crane Operator) CCO certification and/or local or state certification.
- Rated load capacities and recommended operating speeds, special hazard warnings, or instructions, shall be conspicuously posted on all equipment; they shall be visible to the operator from his/her control station, and an accessible fire extinguisher of 10:ABC rating, shall be available at all operator stations or cabs of equipment. Crane operations position shall be kept clear of loose tools or material.
- Outrigger cribbing shall be used for all crane operations. The size of the cribbing shall be determined by taking the cranes capacity and dividing by 5 (example: 40 to crane divided by 5 = 8 sq. ft. per outrigger).
- All cranes working over shafts or lifting personnel platforms shall have anti-two block devices installed and operating properly.
- Radio or other positive means of communication shall be used to direct the operator when the point of operation is not in direct view of the operator.
- The operator shall respond to signals from only one person. The operator shall not follow any signal which is not understood but shall always obey a stop signal.
- The operator shall be responsible for the operations and load under their control at all times. Whenever there are doubts about the safety of movement, the operator shall stop operations until safety is assured.
- A warning signal, such as a horn, shall be sounded to alert personnel to proximity of moving loads. Loads should not be passed over personnel, and personnel should not be permitted to work in the area directly under a suspended load.
- Concrete buckets - Employees shall be permitted to work under concrete buckets while the buckets are elevated.
- **Employees shall keep out from under suspended loads at all times.**
- Employees shall not ride on loads, slings, hooks, buckets or other load handling attachments.
- All repairs, adjustments, modifications, rigging assembly or dismantling shall be conducted only by qualified and authorized personnel.
- The swing radius shall be barricaded, or other positive means shall be taken to prevent personnel from entering the area between the counter weight/swing radius and any stationary and/or outside obstructions.
- A critical lift checklist will be completed and submitted anytime:
 - 2 cranes are used to make a lift
 - when a lift exceeds 75% of the load chart
 - or any unusual conditions are encountered(See Appendix C, "Critical Lift Checklist")
- Crane suspended work platforms shall only be used if there is no other safe means to reach the work area. The Contractor shall complete a JSA prior to the lift.
- Any overhead wire shall be considered to be energized unless and until the person owning such line or operating officials of the electrical utility supplying the line assures that it is NOT ENERGIZED, and it has been visibly grounded at the work site.
- Taglines shall be used to control all loads
- Daily inspection of all cranes shall be completed and documented prior to crane use

Rigging

- Major rigging operations shall be planned and supervised by Competent Personnel to ensure that the best methods and most suitable equipment and tackle are employed. This should be the superintendent or foreman in charge.
- Job site management shall ensure that:
 - Proper rigging equipment is available.
 - All rigging is inspected before use. Documented inspections are required.
 - Correct load ratings are available for the material and equipment used for rigging.
 - Rigging material and equipment are maintained in proper working condition.
- The supervisor of the hoisting operation shall be responsible for:
 - Proper rigging of the load.
 - Supervision of the rigging crew.

- Ensuring that the rigging material and equipment have the necessary capacity for the job and are in safe condition.
- Ensuring correct assembly of rigging material or equipment as required during the operation, such as the correct installation of lifting bolts.
- Safety of the rigging crew and other personnel as they are affected by the rigging operation.

Excavation (Any process which disturbs soil)

- A. Contact MSCAA/FAA thru the Construction Manager at least 72 hours prior to proposed work for location of underground hazards (cables, ducts, fuel lines, etc.). A request form will be provided to the contractor.
- B. The contractor must contact Tennessee one call at least 72 hours prior to proposed excavation for location of utilities. Contractor must make arrangements to have personnel at the site when utilities are located. Documentation of the control number must be maintained on site.
- C. **Utilities must be located/marked prior to any process that disturbs the soil.**

Earthmoving Equipment and Trucks

- All earthmoving equipment shall be maintained in safe working condition and shall be appropriate and adequate for the intended use.
- Only authorized personnel shall operate equipment. Operators of equipment, machinery or vehicles shall be qualified and properly licensed for the operation involved.
- Equipment maintenance shall be performed only by qualified mechanics.
- Equipment operators and truck drivers shall make a documented pre-shift safety inspection of their equipment. Any conditions that effect safe operation will be corrected before use.
- Equipment shall not be operated unless all required safety devices are in place and functioning properly.
- Careless, reckless, or otherwise unsafe operation or use of equipment shall result in discipline and may constitute grounds for dismissal.
- Before performing any service or repair work, all equipment shall be stopped and positively secured against movement or operation, locked and tagged out of service, unless it is designed to be serviced while running, following the manufacturer's instructions.
- When equipment is serviced or repaired, the operator shall dismount until the service or repair is completed and then make a complete walk-around safety check before remounting.
- All heavy equipment including cranes, forklifts, dozers, end-loaders, skid-steers, etc., shall have a reverse signal/back-up alarm audible above surrounding background noise.
- All off-highway earthmoving equipment and trucks such as loaders, dozers, scrapers, motor graders, rock trucks, tractors, rollers and compactors shall be equipped with roll-over protective structures (ROPS) and seat belts.
- Seat belts shall be used and adjusted properly by operators of all heavy equipment.
- Mobile equipment shall not be left unattended unless parked securely to prevent movement, with all ground engaging tools lowered to the ground, brakes set and the engine off.
- Equipment parked at night shall be lighted, barricaded or otherwise clearly marked when exposed to traffic. Keys shall not be left in equipment overnight.
- Personnel shall not be transported or ride on equipment or vehicles that are not equipped with seats for passengers.
- When fueling equipment or vehicles with gasoline or liquefied petroleum gas (LPG) the engine shall be shut down.
- All equipment and vehicles shall be equipped with appropriate fire extinguisher or fire suppression system.
- Haul roads shall be designed, constructed, and maintained for safe operation consistent with the type of haulage equipment in use. Standard traffic control signs shall be used where necessary.
- Elevated roadways shall have axle high beams or guards maintained on their outer banks.
- Equipment, tools, and materials hauled on pickups and flat bead trucks must be secured to prevent them from falling onto the road.

Welding & Cutting

- Welding leads and cutting hoses shall be kept clear of walkways and stairways.
- Flash arrestors shall be installed provided in both oxygen and acetylene hoses at the regulator connection.
- Welders shall wear approved eye and head protection when welding. Personnel assisting the welder shall also wear approved eye protection.

- Prior to welding or cutting a "20-ABC" rated fire extinguisher shall be within easy reach of the worker. A fire watch shall be stationed at all locations where sparks and/or flames may fall to a lower floor/work area or to another side of a wall.
- A suitable cylinder truck, with chain shall be used to keep cylinders from being knocked over while in use.
- Spent welding rods shall be picked up and disposed of daily.
- When practical all welding and cutting operations shall be shielded by non-combustible or flame-proof screens.
- Oxygen and acetylene cylinders shall not be stored inside buildings.
- Rubber boot protectors shall be provided on all welding leads where they make connections at the welding machine

Personal Protective Equipment

Eye and Face Protection

All employees shall wear safety glasses 100% of the time while on the construction site. Minimum eye protection shall include approved safety glasses **with side shields** which meet the standards specified in ANSI Z-87.1-1989 (this shall also include prescription eye wear).

Additional eye and face protection in combination shall be worn when:

- Welding, burning, or cutting with torches
- Using abrasive wheels, portable grinders, or files
- Chipping concrete, stone, or metal
- Working with any materials subject to scaling, flaking, or chipping
- Drilling or working under dusty conditions
- Using explosive actuated fastening or nailing tools
- Working with compressed air or other gases

Only clear safety glasses shall be worn inside any building(s).

Head Protection

All construction workers shall wear hard hats which meet ANSI Z 89.1-1986, 100% of the time while on the construction site. Hard hats shall display the company decal where the employee works.

All delivery personnel, vendors and visitors shall wear approved hard hats while on the project.

Hearing Protection

Work areas shall be monitored to identify areas of high noise exposure (85 dBA and higher). All work areas identified as high noise exposure shall be properly posted to warn employees of the exposure.

Appropriate hearing protection shall be worn in work areas where noise levels are 85 dBA or greater.

Respiratory Protection

Contractors whose work activities warrants that employees wear respiratory protection, shall establish and implement a respiratory protection program. The program shall meet the requirements set forth in 29 CFR 1926.134.

Foot Protection

All personnel on the construction site shall wear leather hard-soled work boots. No one is permitted to wear sneakers (including ANSI approved), tennis shoes or athletic shoes of any type, sandals, high heels or thongs on the construction site.

Clothing

Suitable clothing for construction shall be worn on the construction site. Shirts with sleeves (at least t-shirt (4 inches) in length), full length pants and reflective safety vests shall be required. Shorts, sweatpants or tank-tops are not allowed.

Appendix A - Safety Orientation

Check each box when completed - To be completed by all employees on the jobsite. To be completed by site supervision and employee prior to beginning work.

- Alcohol and/or drug use, fighting or horseplay are prohibited and will result in immediate termination
- 100 % eye protection, hard hats and reflective safety vests are required when on the construction project
- Review potential hazards on the project and the precautions to be taken to prevent injury
- Disciplinary Policy:

Non-serious violation

First violation - Verbal warning

Second violation - Verbal & written warning

Third violation - Verbal & written warning and three day suspension without pay

Fourth violation - Employee discharge from company

Serious violation - (see disciplinary policy)

First violation - Verbal & written warning

Second violation - Employee discharge from company

- Hazard Communication Program - location of MSDS's and written program on the project
- All accidents, injuries and unsafe conditions shall be reported to supervisor immediately
- Medical treatment protocols for injuries requiring off-site medical treatment with a doctor
- Safety meetings are held on a weekly basis (attendance is mandatory)
- All employees shall dress properly while working. Minimum attire is long pants, shirt with at least 4-inch sleeves and sturdy above the ankle work boots
- Ground fault circuit interrupters (GFCI) are required on all tools. All extension cords and power tools shall be properly grounded. Notify supervision immediately if defective equipment exists.
- All employees exposed to a fall exposure of six or greater, shall be protected by the means of fall protection. Specific training is required for fall protection.
- Employees are not allowed to work in excavations 4 feet or more in depth, unless they are properly sloped or protected by shielding or shoring
- Lockout/tagout is required when working on equipment or tools where unexpected start-up may occur, or the release of energy may result in injury
- Before any employee is allowed to wear a respirator (including paper masks) they must be medically approved by a doctor and fit-tested
- Scaffolds shall be inspected and tagged prior to use by any personnel. Red tag means DO NOT USE; Yellow Tag means section of scaffold does not meet OSHA standards and Green Tag means SAFE FOR USE.
- Other hazards discussed related to the construction project:

Equipment Issued

- Hardhat
- Safety Glasses
- Orange vest
- Fall Protection Harness & Lanyard
- Respirator
- Other _____

To be completed by supervisor in the field with the employee

- Show employee around the project and discuss potential hazards
- Introduce employee to crew members
- Assign new employee to experienced work crew
- Specify work duties
- Where to eat lunch

This is to acknowledge that I have completed new employee orientation and understand that failure to comply with the Safety Program may be grounds for dismissal.

Employee Print Name: _____ Date: _____

Emergency Contact: _____

Employee Signature: _____

Supervision Signature: _____ Date: _____

Appendix B – Employee Disciplinary Guideline

The discipline policy is intended to encourage compliance with the requirements of the Federal Occupational Safety and Health Act of 1970 (OSHA) and all additions and revisions thereto, as well as other applicable federal, state and local requirements and this Safety and Health Guideline. Workers performing work in an unsafe manner that would endanger the employee, other workers or the public shall be subject to discipline or termination.

The Project Representative in conjunction with the Project Manager and Project Foreman will determine the course of action best suited to the circumstances. The steps to be taken shall be progressive, except in the most egregious circumstances and shall include:

- a) **Non-Serious** – Initial, isolated, or rare instances of violation, that do not result in danger to the employee, property, or others, should be corrected through non disciplinary discussion and instruction. Safety violations of a less serious nature will be handled as follows:

First Offense	Verbal Warning
Second Offense	Written Warning
Third Offense	Employee given three-day suspension without pay
Fourth Offense	Employee Discharge

- b) **Serious** – One which could result in serious injury or loss of life or serious loss of property, shall be subject to:

First Offense	Employee given three-day suspension without pay
Second Offense	Employee Discharge

- c) **Supervisor Accountability** – If two or more employees working for the same supervisor are found in serious violation as described above, that subcontractor supervisor is also subject to disciplinary action up to and including immediate discharge.

Documentation - Notice of safety violation (written) shall be given to the employee, and a copy sent to the Project Safety Representative.

Appendix C - Critical Lift Checklist

Project: _____

Date: _____

Description of Lift: _____

Name of supervisor in charge of lift: _____

Name of crane operator(s): _____

Name of signal person(s): _____

Crane Data:

Make and Model: _____

Boom Length: _____

Counterweight: _____

Capacity: _____

Load Data:

Gross Load Weight: _____

Rigging Weight: _____

Load block & line Weight: _____

Max. Load Radius: _____

Min. Load Angle: _____

Max. Boom Angle: _____

Min. Boom Angle: _____

Net Load Weight: _____

Pre-Lift Requirements:

- _____ Load is within chart limits.
- _____ Has the Center of Gravity of the Load been established and marked?
- _____ Is rigging adequate and in good condition?
- _____ Load chart utilized is for exact crane model; boom type, length, tip; counterweight.
- _____ Competent person in charge of lift: Name
- _____ Competent signal person identified: Name
- _____ Pre-pick meeting held with crew
- _____ Written crane inspection completed within 1 day of critical pick
- _____ Swing path not over personnel
- _____ Footing is sound and level (soil conditions/compaction, underground tunnel or utilities).
- _____ Pre-planning for radio or hand signal communications.
- _____ Minimum clearances from power lines can and will be maintained.
- _____ The load radius has been measured with tape measure.
- _____ Weather conditions have been checked, including wind speed.
- _____ Load will not touch boom at any time.
- _____ For dual crane lift – diagrams have been prepared.
- _____ Pad blocking is adequate and substantial.
- _____ Outriggers are fully extended.

Signed: _____
Supervisor in Charge

Appendix D – Substance Abuse

Policy Statement

The Owner **Memphis-Shelby County Airport Authority** and the OCIP Team are committed to providing project employees with a drug-free and alcohol-free workplace. It is our goal to protect the health and safety of these employees and visitors to our job site, promote a productive workplace, and protect the reputation of our project.

Consistent with those goals, the use, possession, distribution, or sale at project sites of drugs, drug paraphernalia or alcohol is prohibited. A program of drug and alcohol testing will be instituted to monitor compliance with this policy.

Contractors / Subcontractors refusing to comply with this Drug and Alcohol Policy will not be permitted to work on this OCIP project and will be noted as being in violation of their contract with the (Project Name) / or other contractors & subcontractors working on this project.

This Policy does not represent a contract between the Owner **Memphis-Shelby County Airport Authority**, Design and Development, the OCIP Team, Owners of project, Construction Managers, General Contractors, Subcontractors, employees, or perspective employees of the project.

Policy Administration

It is our combined goal to protect the health and safety of personnel, craft workers, and visitors to our job site; to promote a productive workplace and protect the reputation of this OCIP.

Prohibited Substances

1. Drugs or Drug is defined as any substance which may impair mental or motor function including but not limited to illegal drugs, controlled substances, designer drugs, synthetic drugs, look alike drugs, and under circumstances described in this policy -prescription drugs.
2. Alcohol is defined as any beverage or substance containing alcohol, ethyl alcohol or ethanol. "Alcohol Testing or Alcohol test means testing by certified breath-alcohol technician using a DOT approved initial screening device or urine alcohol testing conducted by a certified laboratory and confirmed by gas chromatography/mass spectroscopy (GC/MS)". Test levels must not meet or exceed.04 grams per 210 liter of breath.

Pre-Project Testing

Prior to the beginning work on this Project, employers will be required to ensure that all employees have met the requirements of this policy with a negative (passing) test result. Employers and employees not meeting the requirements will not be allowed to work on this OCIP job site.

Additional Testing of Employees

1. **Post-Accident:** It is agreed that drug and alcohol testing of employees shall be required after each and every work-related incident. This testing shall take place at the medical facility providing treatment for the injury. A work-related accident is defined as an accident resulting in an injury requiring treatment by a physician to the employee or other employees injured and / or resulting in damage to property or equipment.
2. **Reasonable Suspicion:** Is defined as supervision having a reason to suspect employee drug or alcohol use. The employer will bear the cost of this test.

Points of Understanding Regarding Substance Abuse Testing

1. The employer, the medical facility and the testing laboratory agree that the results of the described tests are to be held in strictest **CONFIDENCE** between the employer, the OCIP Workers Compensation Carrier and the medical facility (MRO). This is an issue of employee – employer relationship (employment) and falls under the requirements within the employer's program.

2. This statement is noted for the purpose of adjudicating a workers compensation claim. The OCIP Workers Compensation Carrier requires the employer to report all accident-related drug and alcohol test results to them immediately.

Testing Procedures

1. At a minimum pre-project and post-accident testing is required.
2. Testing shall include the following drugs at a minimum:
Marijuana, Cocaine, Opiates, Amphetamines, Phencyclidine, Barbiturates, Benzodiazepines, Methadone, Propoxyphene
3. For reasons of safety, any employee subject to a reasonable suspicion test shall be suspended until test results are available.

Prescription Drugs

The use of current valid prescription Drugs that may impair an employee's ability to safely perform his or her duties must be reported to the safety director, supervisor and management personnel.

Alcoholic Beverages

Under no circumstances are alcoholic beverages allowed on the project site.

Disciplinary Action

1. A positive pre-project or post-accident test will result in worker dismissal from this project site
2. Employees found using, selling, possessing, or manufacturing drugs shall be removed from this project and may be reported to local law enforcement.

Confidentiality

All actions taken under this policy will be in conformance with the Local Drug Testing Act

Subcontractors and Vendors

Subcontractors, sub-tiered contractors, vendors, and their employees shall cooperate with this policy in achieving a drug-free and alcohol-free workplace.

Amendments to Policy

Amendments to this policy may be issued to comply with project owner requirements, state or local laws, or federal contract requirements.

Company Name _____

**DRUG AND ALCOHOL POLICY
ACKNOWLEDGMENT AND ACCEPTANCE STATEMENT**

I certify that I have read and understand the statement and policy. I further understand that prior to employment and during employment, I am subject to drug and alcohol screening tests. I agree to provide the specimen appropriate to such drug or alcohol test(s) as may be required. I further understand that my property and I may be subject to search under the terms of this policy while I am on the Owner's premises. Failure to provide the appropriate specimen, or to permit a search, will subject me to removal from this site.

I also understand that I will not be allowed to go to work prior to the reporting of my pre-employment drug test results.

If I am an employee of a subcontractor company, an employee of an affiliate company assigned to the job site, or a contract staff, I understand that I am subject to pre-employment drug testing and all testing conditions of this Policy. Failure to provide the appropriate specimen or to permit a search or a positive test result will result in my immediate removal from this job site.

Signature

Date

Print Name and Title

Witness

Guidelines for Reasonable Suspicion

Observation Checklist

- 1. **Walking** ___ Stumbling ___ Staggering ___ Falling ___ Unable to Walk
 ___ Swaying ___ Unsteady ___ Holding On ___ Normal
- 2. **Standing** ___ Swaying ___ Rigid ___ Unable to Stand
 ___ Staggering ___ Sagging at Knees ___ Feet Wide Apart
- 3. **Speech** ___ Shouting ___ Silent ___ Whispering ___ Slow
 ___ Rambling ___ Mute ___ Slurred ___ Slobbering
 ___ Incoherent ___ Confused ___ Normal
- 4. **Demeanor** ___ Cooperative ___ Polite ___ Calm ___ Sleepy
 ___ Silent ___ Talkative ___ Crying ___ Excited
 ___ Sarcastic ___ Fighting
- 5. **Actions** ___ Resisting ___ Fighting ___ Threatening ___ Erratic
 ___ Communications
 ___ Drowsy ___ Profanity ___ Hyperactive ___ Hostile
 ___ Calm
- 6. **Eyes** ___ Bloodshot ___ Watery ___ Dilated ___ Glassy
 ___ Droopy ___ Closed ___ Normal
- 7. **Face** ___ Flushed ___ Pale ___ Sweaty ___ Normal
- 8. **Appearance/
Clothing** ___ Unruly ___ Messy ___ Dirty ___ Partially Dressed
 ___ Body ___ Stains ___ Neat ___ Normal
 ___ Excrement
- 9. **Breath** ___ Alcoholic ___ Faint Alcohol ___ No Odor
 ___ Odor ___ Odor
- 10. **Movement** ___ Fumbling ___ Jerky ___ Slow ___ Hyperactive
 ___ Nervous ___ Normal
- 11. **Eating/
Chewing** ___ Gum ___ Candy ___ Mints ___ Other – identify
- 12. Other observations: (Visible drug use, possession, sale, etc.: attendance; poor work performance or accident; tampering with drug test; credible reports, etc.)

Observed by: _____ Observed by: _____

Date: _____ Time: _____ Location: _____

Appendix E - Supervisor's Report of Bodily Injury

Date of Accident _____ Date Returned to Work: _____

Location of Accident _____ Time of Accident _____ am/pm

Contractor/Subcontractor Involved _____

First Aid: _____ Recordable _____ Lost Time _____ Fatality _____

Damage* _____ Fire _____ Property _____

Equipment _____

Injured Person: _____ SSN: _____

Address: _____ Occupation: _____

_____ Home Phone: _____

Male _____ Female _____ Age _____

Nature of Injury: _____

First Aid Administered By: _____

Hospital _____

Physician _____

Witnesses: _____

Equipment and/or Materials Involved: _____

Cause Of Accident: _____

Superintendent's Corrective Action: _____

Employee's Signature: _____

Supt. Signature _____

Date of report: _____

*Attach a list of damaged property and/or equipment excluding motor vehicles. Indicate owner's names and addresses. Complete "Report of Damage to Equipment or Property" (Appendix F).

Appendix F - Report of Damage to Equipment or Property

Date _____

Contractor/Subcontractor _____

Location of Accident _____

Equipment Involved _____

Personal injuries Yes _____ No _____

Damage Estimate \$ _____

<u>Witness to Accident</u>	<u>Statement Obtained</u>		<u>Statement Attached</u>	
	Yes	No	Yes	No
_____	Yes	No	Yes	No
_____	Yes	No	Yes	No
_____	Yes	No	Yes	No

Remarks _____

Time of Accident _____ AM _____ PM _____ Date _____

Weather Conditions _____ Temperature _____

Roadway or surface type _____ Wet _____ Dry _____ Other _____ *

*If other, explain _____

If more space is required, use back of this sheet for additional information and sketches.

Signed _____

Title _____

Employee Name _____

Appendix G - Contractor Monthly Report of Safety Statistics

MONTHLY ACCIDENT EXPERIENCE SUMMARY	CONTRACT NO:		
	CONTRACTOR/SUBCONTRACTOR NAME:		
	MONTH	YEAR	
	REPORTING PERIOD: THROUGH:		
	THIS MONTH	YEAR TO DATE	PROJECT TO DATE
HOURS WORKED			
PAYROLL			
A. FIRST-AID CASES B. OSHA RECORDABLE CASES C. LOST TIME CASES (list each under comments) D. TOTAL LOST WORK DAYS E. PROPERTY DAMAGE F. EQUIPMENT G. GENERAL PUBLIC			
OSHA Recordable Incidence Rate* Lost Time Incident Rate*			
COMMENTS:			
Prepared By:	Date	PM/Superintendent	Date

Appendix H – Safety Improvement Team Guidelines

The Owner recognizes that a cooperative effort is required to insure a safe construction project. Therefore, the Contractor shall establish a Safety Improvement Team to facilitate the proper cooperative attitude.

The Safety Improvement Team shall be composed of an equal number of employee and management representatives. The management personnel (4) will consist of one Owner representative, one person from the Contractor, one from the workers' compensation/general liability insurance carrier and a representative of subcontractor supervision. The employee members (4) shall be selected from the various subcontractor trades on a voluntary basis or by nomination to serve a minimum of one year each.

The Contractor's Safety Manager shall serve as the Safety Improvement Team advisor and is responsible for providing meeting agendas and minutes, giving assignments to the committee, and publicizing committee accomplishments. Safety Improvement Team meeting minutes and attendance roster shall be maintained.

The Contractor's Safety Manager is responsible for assuring that Committee members are adequately trained to perform their duties and responsibilities.

The Contractor's Safety Manager is responsible for assuring that subcontractors with 25 or more employees establish their own Safety Improvement Team commensurate with the NRS requirements.

The primary purpose of the Safety Improvement Team is to evaluate safety and health program effectiveness, suggestions, hazard reports, hotline reports, etc., and to provide suggestions and recommendations to improve workplace safety.

Additional duties include advising and educating employees in safe working practices, investigating accidents and their causes, recommending preventative measures, inspecting work areas, and other duties as assigned

Meetings shall be held at least monthly, discussion items shall include:

- Inspection Reports

- Accident Reports

- The safety of construction methods and practices

- Review and make recommendations on employee hazard reports, hotlines, etc.

The Safety Improvement Team members will receive their regular rates of pay while performing Safety Improvement Team duties. Time spent performing Safety Improvement Team duties shall be documented using normal time reporting procedures.

**EXHIBIT E
TO
LUMP SUM CONSTRUCTION CONTRACT
FOR
“A” BAGGAGE MAKEUP CAROUSEL REPLACEMENT – DESIGN/BUILD**

**BY AND BETWEEN
THE MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
(CONTRACTOR NAME)**

FAA REQUIRED CONTRACT PROVISIONS

Federal laws and regulations require that recipients of federal assistance (Sponsors) include contract provisions in certain contracts, requests for proposals, or invitations to bid. The provisions are as follows:

1. Title VI Clauses for Compliance with Nondiscrimination Requirements (FAA Provision A6.4.1). (Reference: 49 USC § 47123)

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:

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.

Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the 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.

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.

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.

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.

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.

2. Title VI List of Pertinent Nondiscrimination Acts and Authorities (FAA Provision A6.4.5).

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

Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);

49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;

The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);

Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

3. Federal Fair Labor Standards Act (FAA Provision A17). (Reference: 29 U.S.C. § 201, *et seq.*)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, 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.

4. Occupational Safety and Health Act of 1970 (FAA Provision A20). (Reference: 29 CFR part 1910)

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. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor 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 (20 CFR Part 1910). Contractor 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.

5. General Civil Rights Provisions (FAA Provision A5). (Reference: 49 U.S.C. § 47123)

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

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

**EXHIBIT F
TO
CONSTRUCTION CONTRACT
FOR
"A" BAGGAGE MAKEUP CAROUSEL REPLACEMENT – DESIGN/BUILD**

**BY AND BETWEEN
THE MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
AND
(CONTRACTOR NAME)**

STATE REQUIRED CONTRACT PROVISIONS

STANDARD TERMS AND CONDITIONS:

Grantees shall not assign an Aeronautics Grant Contract or enter into a subcontract for any of the services performed under an Aeronautics Grant Contract without obtaining the prior written approval of the State. If such subcontracts are approved by the State, each shall contain, at a minimum, sections of the Aeronautics Grant Contract pertaining to "Conflicts of Interest," "Lobbying," "Nondiscrimination," "Public Accountability," "Public Notice," and "Records" (as identified by the section headings). Notwithstanding any use of approved subcontractors, the Grantee shall remain responsible for all work performed.

CONTRACT CLAUSES:

- F.1. Conflicts of Interest. Contractor warrants that no part of the total contract amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to MSCAA in connection with any work contemplated or performed relative to this Contract.
- F.2. Lobbying. The Contractor certifies, to the best of its knowledge and belief, that:
- a. No federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of 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.
 - b. If any funds other than federally 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 contract, grant, loan, or cooperative agreement, the Promisor shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
 - c. The Contractor shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into and is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352.

- F.3. Nondiscrimination. Contractor hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Grant Contract or in the employment practices of the Contractor on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal, Tennessee state constitutional,

or statutory law. The Contractor shall, upon request, show proof of nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.

- F.4. Public Accountability. If the Contractor is subject to Tenn. Code Ann. § 8-4-401 *et seq.*, or if this Contract involves the provision of services to citizens by Contractor on behalf of the State, Contractor agrees to establish a system through which recipients of services may present grievances about the operation of the service program. The Contractor shall also display in a prominent place, located near the passageway through which the public enters in order to receive Grant supported services, a sign at least eleven inches (11") in height and seventeen inches (17") in width stating:

NOTICE: THIS AGENCY IS A RECIPIENT OF TAXPAYER FUNDING. IF YOU OBSERVE AN AGENCY DIRECTOR OR EMPLOYEE ENGAGING IN ANY ACTIVITY WHICH YOU CONSIDER TO BE ILLEGAL, IMPROPER, OR WASTEFUL, PLEASE CALL THE STATE COMPTROLLER'S TOLL-FREE HOTLINE: 1-800-232-5454.

The sign shall be on the form prescribed by the Comptroller of the Treasury. MSCAA shall obtain copies of the sign from the Tennessee Department of Transportation, Aeronautics Division, and upon request from the Contractor, provide Contractor with any necessary signs.

- F.5. Public Notice. All notices, informational pamphlets, press releases, research reports, signs, and similar public notices prepared and released by the Contractor in relation to this Contract shall include the statement, "This project is funded under a grant contract with the State of Tennessee." All notices by the Contractor in relation to this Contract shall be approved by the State.

- F.6. Records. The Contractor and any approved subcontractor shall maintain documentation for all charges under this Contract. The books, records, and documents of the Contractor and any approved subcontractor, insofar as they relate to work performed or money received under this Grant Contract, shall be maintained in accordance with applicable Tennessee law. In no case shall the records be maintained for a period of less than five (5) full years from the date of the final payment. The Contractor's records shall be subject to audit at any reasonable time and upon reasonable notice by the Tennessee Department of Transportation, the Comptroller of the Treasury, or their duly appointed representatives.

The records shall be maintained in accordance with Governmental Accounting Standards Board (GASB) Accounting Standards or the Financial Accounting Standards Board (FASB) Accounting Standards Codification, as applicable, and any related AICPA Industry Audit and Accounting guides.

In addition, documentation of grant applications, budgets, reports, awards, and expenditures will be maintained in accordance with U.S. Office of Management and Budget's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*.

Contract expenditures shall be made in accordance with local government purchasing policies and procedures and purchasing procedures for local governments authorized under state law.

The Contractor shall also comply with any recordkeeping and reporting requirements prescribed by the Tennessee Comptroller of the Treasury.

The Contractor shall establish a system of internal controls that utilize the COSO Internal Control - Integrated Framework model as the basic foundation for the internal control system. The Contractor shall incorporate any additional Comptroller of the Treasury directives into its internal control system.

Any other required records or reports which are not contemplated in the above standards shall follow the format designated by the head of the Tennessee Department of Transportation, the Central Procurement Office, or the Commissioner of Finance and Administration of the State of Tennessee.

DIVISION 0 – SECTION 00605

CERTIFICATE OF SECRETARY

AS TO RESOLUTION ADOPTED BY BOARD OF DIRECTORS

On _____

I, _____, hereby certify that I am the duly authorized Secretary of _____, charged with keeping the records and the seal of said Corporation, and that the following is a true and correct copy of a resolution adopted at a meeting of the Board of Directors of the Corporation duly held on _____, which resolution is now in full force and effect.

RESOLVED, that _____, (President, Vice President) of _____ is hereby authorized to execute contracts, performance bonds and labor materials bonds on behalf of the Corporation.

WITNESS my hand as Secretary, and the seal of the Corporation this ____ day of _____, 20____.

Secretary

BEFORE ME, a notary public of the state and county mentioned, personally appeared

_____, with whom I am personally acquainted, and who, upon oath,

acknowledged such person to be _____, and officer authorized to execute the

instrument, of _____, the within named bargainor, a corporation, and that such

officer, as such _____, executed the foregoing instrument for the purposes therein contained, by personally signing their name of the corporation as _____.

WITNESS my hand and seal, at office, this _____ day of _____, 20____.

Notary Public (SEAL)

My Commission Expires: _____

END OF SECTION 00605

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PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

as Principal, hereinafter called Contractor or Principal, and

as Surety, hereinafter called Surety, are held and firmly bound unto

MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY

hereinafter called Owner, or Obligee, in the amount of _____ Dollars, for the performance whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly, severally, and solidarily, firmly by these presents.

The penal sum of this Performance Bond shall be increased by the amount that the Contract, as herein below defined, is increased during the term of the Performance Bond.

WHEREAS, Principal has entered into a written agreement with the Owner (hereinafter referred to as "Contract") for:

in accordance with Drawings and Specifications prepared and to be prepared by

RENAISSANCE GROUP

which Contract is by reference incorporated herein and made a part hereof.

WHEREAS, the Surety represents that it possesses an A-VIII rating or higher in the most recent edition of Best Insurance Reports and that Surety is authorized to execute and deliver bonds in the State of Tennessee.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly and faithfully perform each and every term, condition, obligation and provision of said Contract, including but not limited to, completion and delivery of the work described in the Contract within the scheduled time as such time may be extended from time to time as permitted in the Contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The Surety shall within sixty (60) days from notice by Owner to the Surety, either

1. Proceed to complete the performance of the Contract timely in accordance with the terms and conditions of the Contract, including but not limited to:

- (a) The responsibilities of the Principal for completion of the Work, correction of defective Work, warranty Work and payment for the Work; and
- (b) Payment of liquidated damages specified in the Contract, or

2. Pay to the Owner the amount of its costs and damages, up to the penal sum of this bond, that would be owed by the Principal to the Obligee under the Contract to complete the obligations of the Principal, including any liquidated damages that may be due and any additional legal, design professional or delay costs resulting from the Contractor's default less any remaining contract funds.

The Surety hereby waives notice of any alteration or extension of time made by the Owner. The Surety hereby waives notice of any change in the scope of the Contract.

Any suit under this Performance Bond must be instituted in a court of competent jurisdiction, in Shelby County, Tennessee, and not elsewhere within four (4) years from Substantial Completion as defined in the Contract.

No right of action shall accrue on this bond to or for the use of any person, partnership or corporation other than the Owner or the heirs, executors, administrators, successors or assigns of the Owner.

Notice of claim to the Surety under the bond shall be sent to the following address:

SIGNED AND SEALED this ____ day of _____, 20____.

PRINCIPAL

TITLE: _____

SURETY

TITLE: _____

ADDRESS

CITY STATE ZIP CODE

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

as Principal, hereinafter called Contractor or Principal, and

as Surety, hereinafter called Surety, are held and firmly bound unto

MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY

hereinafter called Owner or Obligee, in the amount of _____ Dollars, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly, severally, and solidarily, firmly by these presents.

The penal sum of this Labor and Material Payment Bond shall increase by the amount that the Contract, as herein below defined, is increased during the term of the Labor and Material Payment Bond.

WHEREAS, Principal has entered into a written agreement with the Owner (hereinafter referred to as the "Contract") for:

in accordance with Drawings and Specifications prepared and to be prepared by

RENAISSANCE GROUP

which Contract is by reference incorporated herein and made a part hereof.

WHEREAS, the Surety represents that it possesses an A--.VIII rating or higher in the most recent edition of Best Insurance Reports and that Surety is authorized to execute and deliver bonds in the State of Tennessee.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly and faithfully complete the work as defined in the Contract free and clear of all claims, liens and any other contractual, statutory, or legal rights the Claimants, as hereinbelow defined, may have for the payment of amounts owed in connection with or arising out of the Contract ("Claims"); and the Principal shall make prompt payment to all persons having a Claim or lien pursuant to any statute or law of the State of Tennessee, then this obligation shall be void; otherwise, it shall remain in full force and effect.

1. A Claimant is defined as one having a contract with the Principal or a subcontractor or supplier of any tier for labor, materials, equipment used or reasonably required for use in the performance of the Contract, labor and materials being construed to include water, power, gas, light, heat, oil, gasoline, or telephone services applicable to the Contract.
2. No suit or action shall be commenced by any Claimant:
 - a) After the expiration of two (2) years following the date which Substantial Completion as defined in the Contract is achieved. However, if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

- b) Other than in a court of competent jurisdiction in Shelby County, Tennessee, and not elsewhere.
- 3. Upon written notice to Surety from the Owner, Surety shall, within forty-five (45) days after receipt of said notice, pay or cause to be paid all Claims made or if the Surety contests in good faith the validity of any Claim, the Surety shall, within forty-five (45) days after receipt of said notice, cause bonds to be posted in an amount and form acceptable to Oblige to bond off such Claims. Surety shall indemnify, defend and hold Oblige harmless from any such Claims together with any and all attorney's fees, costs and expenses or liability in any manner arising out of or in connection therewith.
- 4. The Surety hereby waives notice of any alteration or extension of time made by the Owner. The Surety hereby also waives notice of any changes in the scope of the Contract, including changes to the contract amount.

Notice of claim to the Surety under the bond shall be sent to the following address.

SIGNED AND SEALED this the _____ day of _____, 20____.

PRINCIPAL

TITLE: _____

SURETY

TITLE: _____

ADDRESS

CITY STATE ZIP CODE



MEMPHIS INTERNATIONAL AIRPORT

APPLICATION FOR PAYMENT NO. _____

TO: MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY

REGARDING CONTRACT FOR: **MSCAA PROJECT NO. 19-1423-10-01
A BAGGAGE MAKEUP CAROUSEL REPLACEMENT - DESIGN/ BUILD**

CONTRACTOR: **CONTRACTOR**

FOR WORK ACCOMPLISHED FROM __ TO __

STATUS OF CONTRACT:

ORIGINAL CONTRACT PRICE: **\$0.00**

APPROVED CONTRACT AMENDMENTS:

No. 1 Approved	MM/DD/YYYY	Adds <u>0</u> days	\$0.00
No. 2 Approved	MM/DD/YYYY	Adds <u>0</u> days	\$0.00
No. 3 Approved	MM/DD/YYYY	Adds <u>0</u> days	\$0.00
No. 4 Approved	MM/DD/YYYY	Adds <u>0</u> days	\$0.00
No. 5 Approved	MM/DD/YYYY	Adds <u>0</u> days	\$0.00
No. 6 Approved	MM/DD/YYYY	Adds <u>0</u> days	\$0.00
Total time extension:		Adds <u>0</u> days	

TOTAL AMENDED CONTRACT PRICE **\$0.00**

NOTICE TO PROCEED DATE:	TOTAL INSTALLED TO DATE		
ORIGINAL COMPLETION DATE:	previously installed to date	\$0.00	
AMENDED COMPLETION DATE:	this application installed	\$0.00	\$0.00
REMARKS:	plus STORED MATERIALS		
	previously stored materials	\$0.00	
	this application stored materials	\$0.00	\$0.00
	less PREVIOUSLY CERTIFIED FOR PAYMENT		\$0.00
	equals AMOUNT DUE THIS APPLICATION		\$0.00

CONTRACTOR'S CERTIFICATION:

The undersigned Contractor certifies that (1) all previous progress payments received from Owner on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of Contractor incurred in connection with Work covered by prior Application for Payment number 0 through ___ inclusive; and (2) title to all materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all liens, claims, security interests and encumbrances (except such as covered by Bond acceptable to Owner). Progress status is as described in schedule under monthly construction payment request.

Dated: MM/DD/YYYY

State of: Tennessee

County of: Shelby

Subscribed and sworn to before me this _____ day of _____, YYYY.

Notary Public: _____

CONTRACTOR:
Contractor

BY: _____
Signatory
Title

My Commission Expires: _____

PROGRAM MANAGER'S RECOMMENDATION:

Payment of the above AMOUNT DUE THIS APPLICATION to CONTRACTOR is recommended.

DATED:

BY: _____
Program Manager Signatory

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DIVISION 0 - SECTION 00640

Business Diversity Monthly Compliance Report

MSCAA Project. Name and Number: A Baggage Makeup Carousel Replacement - Design/Build
(19-1423-10-01) Date: _____

To: Memphis Shelby County Airport Authority From: Name: _____
Attn: ReGina Armstrong Company: _____
2491 Winchester Rd., Ste. 113 Address: _____
Memphis, TN 38116-3856 Ph: _____
Owner Gender & Ethnicity: _____

For the month ending _____, I certify that the current payment for this contract was satisfied by the means shown below:

Name, Address, & Phone No. of All Subcontractors	Company Code	Current Payment Amt.	Check No.	Total for Calendar Year	Cumulative Total to Date	Gender	Ethnicity

PLEASE PROVIDE PROOF OF YOUR PAYMENT AMOUNT TO YOUR SUB CONTRACTORS.

Signed: _____ Title: _____

Gender Code: M=Male, F=Female **Proof of Payments:** Copy of Check, or Copy of E-Payment Confirmation

Company Code: DBE =Disadvantaged Business Enterprise, MOC=Majority Owner Company, INC=Incorporated/Partnership, CM/WBE = M/WBEs the owners of which have been certified as having a personal net worth less than \$1.32mil

Ethnicity Code: B=Black, H=Hispanic, N=Native American, AA=Asian American, APA=Asian Pacific American, SCA=Sub Continent Asian, NM=Non-Minority, C=Caucasian & O=Other

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DIVISION 0 – SECTION 00765
SUPPLEMENTAL PROVISIONS

00765-01 CONTRACTOR'S FIELD OFFICE

A Contractor's field office is not required for this project. Contractor shall keep on file at the project site copies of contract drawings, shop drawings, specifications, and other records pertaining to the project, in good condition, and readily accessible to the Contractor, Owner, Engineer, and all parties concerned.

00765-02 PROTECTION OF PERSONS AND PROPERTY

00765-02.1 The Contractor shall be responsible for initiating, maintaining and supervising safety and anti-substance abuse precautions and programs in connection with the Work, and shall provide all protection to prevent injury to all persons involved in any way in the Work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of the Owner who may visit or be affected thereby. These precautions shall include, but in no event be limited to: the posting of danger signs and personal notification to all affected persons of the existence of a hazard of whatever nature; the furnishing and maintaining of necessary traffic control barricades and flagman services; the use, or storage, removal and disposal of required explosives or other hazardous materials only under the supervision of qualified personnel and after first obtaining permission of all applicable governmental authorities; and the maintenance of adequate quantities of both hose and operable fire extinguishers at the job site. The Contractor shall set forth in writing its safety and anti-substance abuse precautions and programs in connection with the Work and, if requested by the Owner, submit the same to the Owner for review. The Owner may, but shall not be obligated to, make suggestions and recommendations to the Contractor with respect thereto.

00765-02.2 All Work, whether performed by the Contractor, its Subcontractors or Sub-Subcontractors, or anyone directly or indirectly employed by any of them, and all equipment, appliances, machinery, materials, tools and like items incorporated or used in the Work, shall be in compliance with, and conform to: (a) all applicable laws, ordinances, rules, regulations and orders of any public, quasi-public or other governmental authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act; and (b) all codes, rules, regulations and requirements of the Owner and its insurance carriers relating thereto. In the event of conflicting requirements, the more stringent shall govern.

00765-02.3 The Contractor shall designate a responsible member of its organization at the Job site as the Project Safety Officer, whose duties it shall be to enforce the Contractor's safety and anti-substance abuse programs, to assure compliance with the Contract Documents and to prevent accidents. This person shall have enforcement authority and be responsible for carrying out the relevant duties and be designated in writing by the Contractor and approved by the Owner. The Contractor shall further cause each of its Subcontractors and Sub-Subcontractors to designate a responsible supervisory representative to assist the Contractor's Project Safety Officer representative in the performance of their duties as aforesaid.

00765-02.4 Should the Contractor fail to provide a safe area for the performance of the Work or any portion thereof, the Owner shall have the right, but not the obligation, to suspend Work in the unsafe area. All costs of any nature (including, without limitation, overtime pay) resulting from the suspension, by whomsoever incurred, shall be borne by the Contractor.

00765-02.5 The Contractor shall provide to each worker on the job site the proper safety equipment for the duties being performed by that worker and will not permit any worker on the job site who fails or refuses to use the same. The Owner shall have the right, but not the obligation, to order the Contractor to send a worker home for the day or to discharge a worker for their failure to comply with safe practices or anti-substance abuse policies, with which order the Contractor shall promptly comply.

00765-02.6 The Contractor shall indemnify the Owner, from and against any and all liability, public or private, penalties, contractual or otherwise, losses, damages, costs, attorney's fees, expenses, causes of action, claims or judgments resulting either in whole or in part from any failure of the Contractor, its Subcontractors or Sub-Subcontractors or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, to comply with the provisions of the Contract. The Contractor shall not be relieved of its responsibilities under the Contract, should the Owner act or fail to act pursuant to its rights hereunder, nor shall the Owner thereby assume, nor be deemed to have assumed, any responsibilities otherwise imposed upon the Contractor by this Construction Contract, in any manner whatsoever.

00765-02.7 The Contractor shall, throughout the performance of the Work, maintain adequate and continuous protection of all Work and temporary facilities against loss or damage from whatever cause, shall protect the property of the Owner and third parties from loss or damage from whatever cause arising out of the performance of the Work and shall comply with the requirements of the Owner, its designated agents, and its insurance carriers and with all applicable laws, codes, rules and regulations with respect to the prevention of loss or damage to property as a result of fire or other hazards. The Owner may, but shall not be required to, make periodic patrols of the job site as a part of its normal security program. In such event, however, the Contractor shall not be relieved of its aforesaid responsibilities.

END OF SECTION 00765

DIVISION 0 – SECTION 00801**AIRPORT CONSTRUCTION SAFETY REQUIREMENTS****PART 1 GENERAL****1.01 SUMMARY**

- A. This section contains the minimum level of safety requirements for construction projects at Memphis International Airport, General DeWitt Spain Airport, and/or Charles W. Baker Airport.
- B. Related work:
 - 1. Other contract documents affecting construction safety include, but are not limited to, the DIVISION 0 AND DIVISION 1 specifications.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION**3.01 CONTRACTOR PERSONNEL SAFETY ORIENTATION**

- A. The Contractor shall be responsible for briefing all construction personnel on the requirements contained in this section prior to their working in the construction area and at periodic intervals throughout the course of the contract. These briefings will be documented in writing.

3.02 SCHEDULING WORK

- A. See Specification section 01100, SEQUENCE OF CONSTRUCTION & LIQUIDATED DAMAGES.
- B. See General Provision Section 80, Paragraph 80-04, Limitation of Operations.

3.03 CONSTRUCTION SECURITY

- A. See Specification section 00802, AIRPORT SECURITY REQUIREMENTS.

3.04 LIMITATION ON CONSTRUCTION

- A. The limits of construction, material storage areas, equipment parking and other areas defined as available for the contractor's exclusive use during construction shall be identified and defined by the contractor prior to starting work on the project. Temporary barricades, flagging and flashing caution lights may be required at access points, taxiway crossings and pavement tie-ins. The type markings, barricades and flashing caution lights are designated on the construction plans and must be inspected and approved by the Airport Authority.
- B. The Contractor shall store all materials and park construction equipment, when not in use only in the areas designated on the plans or during the pre-construction conference.
- C. Stockpiling of dirt and construction materials shall be constrained in a manner preventing movement resulting from jet blast or wind in excess of 10 knots.
- D. Construction debris, waste, wrappings or loose material capable of causing damage to aircraft engines, propellers, or landing gear shall not be allowed on active aircraft movement areas.

Material meeting this criteria shall be contained and removed immediately from the AOA.

- E. Open flame, welding, or torch cutting operations are prohibited in the construction area unless written permission has been given by the Airport Authority and adequate fire and safety precautions have been taken.
- F. The use or possession of explosives is prohibited on Airport property.
- G. Extensive stockpiles of construction materials will not be permitted near runway ends, runway edges, taxiways or aircraft parking aprons.
- H. Excavation and open trenches may be permitted within runway safety areas and up to the edge of structural pavement on taxiways and aprons, on a case-by-case basis, i.e. cable trenches, pavement tie-ins, etc.; but only with prior approval of the Owner and, where required, the FAA.
- I. Hazardous areas, into which no part of an aircraft may enter, (i.e., excavations, open trenches, material stockpiles, etc.) must be permanently delineated by use of barricades with alternate orange and white markings. The barricades are to be supplemented with orange flags (20x20 inch minimum) made and installed so that they are always in the extended position and properly oriented. For nighttime use, the barricades are supplemented with flashing red lights. Light intensity and barricade spacing must adequately delineate the hazardous area. Flare pots are prohibited.

Note: The Contractor shall designate an individual by name who is on call 24 hours per day for emergency maintenance of airport hazard lighting and barricades.

- J. FAA approval is required in advance of scheduled operation of any crane or other construction equipment with top elevation exceeding 300 feet mean sea level or that will penetrate any navigable surface as defined under FAR PART 77. Advance notification of intended use will be provided by the Owner well in advance of intended use.

3.06 CONSTRUCTION VEHICLE TRAFFIC

- A. Access to the construction site is as shown on the plans or as directed by the Owner. No other access point is authorized unless designated in writing by the Airport Authority. Construction traffic will operate only on designated haul routes within the construction area limits.
- B. Drivers of construction vehicles will be knowledgeable of construction routes or will be escorted by other Contractor or Owner designated personnel who are knowledgeable.
- C. The Contractor will be responsible for traffic control in the various construction areas of the work site. The Contractor will not permit unauthorized personnel or vehicles on the construction site.
- D. The Contractor shall be responsible for immediate cleanup of any debris deposited along construction routes, as result of his construction traffic.
- E. Directional signing at the construction access gate and along the delivery route to work site temporary storage areas shall be as designated and approved by the Owner.
- F. Construction vehicle identification shall be as prescribed in Specification Section 00802, AIRPORT SECURITY REQUIREMENTS.
- G. No construction vehicle is authorized on any active AOA pavement surface or to enter runway safety areas without specific authorization from the Owner.

3.07 REPORTING PROPERTY DAMAGE OR PERSONNEL INJURY

- A. All persons involved in any accident whether personal injury, aircraft or automotive, occurring on Airport property, shall make a full report to the Airport Police (922-8298) as soon after the accident as possible. The report shall include, but not be limited to, the names, addresses of all principals and witnesses, if known, and a statement of the facts. Construction accidents fall under this category.
- B. In the event of personnel injury requiring ambulance response, the Airport Police Dispatcher, upon notification, telephone 922-8333, will call the ambulance and arrange Airport Police escort to the injury site. A written report will be prepared by the Airport Police after the injury is treated.

END OF SECTION 00801

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DIVISION 0 – SECTION 00802**AIRPORT SECURITY REQUIREMENTS****PART 1 GENERAL****1.01 CONTRACTORS SECURITY AND VEHICLE PROCEDURES OVERVIEW**

- A. This overview outlines procedures concerning Airport security requirements, vehicle operation, and maintenance requirements for contractors at Memphis International Airport or any airport owned and operated by the Memphis-Shelby County Airport Authority. The sponsor Memphis-Shelby County Airport Authority (Airport Authority), airline, tenant, or concessionaire at the Airport who has hired the contractor is responsible for ensuring the contractor understands and complies with all the rules and regulations. This is a consolidated synopsis of the contractor requirements from the Airport Security Program and the Airport Rules and Regulations.

1.02 DEFINITIONS

- A. **Aircraft** - shall mean any contrivance known or hereinafter invented, used or designed for navigation of or flight in the air.
- B. **Air Operations Area (AOA)** - that part of the Airport used or intended to be used for landing, taking off, surface maneuvering, loading, unloading, or servicing the aircraft.
- C. **Airport** - shall mean the Memphis International Airport and/or the General DeWitt Spain Airport and/or the Charles W. Baker Airport – where applicable.
- D. **Airport Restricted Area** - area of Memphis International Airport that is not intended for public uses or access. These are areas designated by the Airport Authority as restricted areas and clearly identified with signs designating those areas as "RESTRICTED AREA." The restricted area also includes the AOA.
- E. **AOA Driver's Permit** - permit issued by the Airport Authority for operating unescorted motor vehicles on the AOA.
- F. **Construction Restricted Area** - any area, inside or outside of the Airport Restricted Area, which is fenced, or in some like manner defined by the Contractor. The Contractor is responsible for the security of the Construction Restricted Area.
- G. **Director** - shall mean the Director of Operations and Public Safety or his duly authorized representatives.
- H. **Job Site** - a predetermined geographic area with specific boundaries established by the Airport Authority.
- I. **Movement Area** - runways, taxiways, and other areas of the Airport used for taxiing, takeoff, and landing of aircraft, except loading ramps and parking areas.
- J. **Personal Escort** - remaining within sight of the individual under escort at all times while in the Airport restricted areas at a distance not to exceed 20 feet.
- K. **Public Area** - any area within Airport facilities open to the general public.
- L. **SIDA** - Security Identification Display Area.

- M. **Unescorted Identification Badge** - pictured identification badge issued by the Airport Authority, which allows bearer to enter Airport Restricted Areas where there is a job related need.
- N. **Vehicle Escort** - means the following of an authorized escort vehicle into the Airport Restricted Areas.

PART 2 PRODUCTS

(No products are required in this Section.)

PART 3 EXECUTION

3.01 AMENDMENTS AND SPECIAL NOTICES

- A. The Contractor will be bound by any future amendments, additions, deletions, or corrections of the Airport Rules and Regulations promulgated by the Airport Authority, as dictated by changes in Federal Transportation Security Administration (TSA) regulations, as dictated by changes in Federal Aviation Administration (FAA) regulations, or safety requirements at Memphis International Airport or any airport owned and operated by Memphis-Shelby County Airport Authority.
- B. Special regulations, notices, memoranda, or directions of an operations nature of interest to persons engaged in business with the Airport Authority, as generated by the Director, shall be issued under the authority of the Airport Regulations and shall have the same effect as the Airport Rules and Regulations.
- C. The Director is authorized to interpret and construe these regulations wherever necessary, either by directions of general or specific application, and his interpretation and construction should be deemed a part of the regulations and binding upon all persons.

3.02 ENFORCEMENT AND COMPLIANCE WITH AIRPORT REGULATIONS

- A. The uniformed Airport Police Officers of the Airport Authority and other representatives as designated by the Director are empowered to require compliance with Airport Rules and Regulations, ordinances of the City of Memphis, laws of the State of Tennessee, and federal rules and regulations. No authority is either hereby expressed or implied, however, that would permit any individual other than the Director to change, alter, or amend Airport Rules and Regulations.
- B. It shall be unlawful for any person to do or commit any act forbidden herein or fail to perform any act required by Airport Rules and Regulations.

3.03 SCOPE

- A. All users of and persons on Airport property shall be governed by the Airport Rules and Regulations and directions of the Director. Airport Rules and Regulations are subject to change by the Airport Authority Board of Directors at any time.
- B. Airport Rules and Regulations are not intended to amend, modify or supersede federal, state, or local laws or regulations.
- C. If any portion of the Airport Rules and Regulations shall be invalid or unenforceable, all other portions shall remain in effect and be construed to achieve the purposes hereof.

3.04 IDENTIFICATION REQUIREMENTS

- A. Entry into the SIDA is controlled by an automated access control system as mandated under CFR 49 Part 1540 and 1542. All persons in the SIDA must display, on the outermost garment, below the head and above the waist, an Airport-approved identification media unless under Airport approved escort.
- B. The Airport Authority will issue Airport Identification badges to the Contractor's employees who require access to the Airport Secured/Restricted Areas. The extent of the background check necessary for access into any worksite will be determined on a project by project basis. AIRPORT ID BADGES REMAIN AIRPORT AUTHORITY PROPERTY. Other identification procedures must be authorized by the Director in accordance with TSA regulations.
- C. Recent changes to Federal TSA Regulations provide for individual sanctions against employees who violate regulatory requirements. Individual employees may be subject to federal enforcement action by the TSA to include civil penalties. Some examples of punishable actions would include:
 - 1. Loaning a badge to someone else for use in the system.
 - 2. "Tailgating" through restricted area doors (or not using their own badge when entering or exiting).
 - 3. Failing to challenge unauthorized individuals in Airport restricted areas.
 - 4. Failing to notify proper authorities for individuals violating prescribed security regulations.
- D. The Memphis International Airport Identification Badge is the property of the Memphis-Shelby County Airport and must be surrendered upon termination of employment or completion of the project. The bearer will be held personally responsible for its return and is subject to any fines or penalties imposed. The badge is mandated through federal government guidelines and any misuse or tampering of badges is punishable under federal guidelines.
- E. Any employee attempting to bypass security measures will be subject to having their badge confiscated and access privileges terminated. Further, any efforts by an employee to circumvent prescribed security measures could result in arrest and the imposition of penalties from the TSA to the employee and to the related employer.
- F. Identification badges will be issued following the procedures listed below.
 - 1. Identification Badge Application – To be issued at Pre-Construction Meeting.
 - a. Prior to the issuance of an Airport identification badge to a contract employee of the Airport or Airport tenant, a badge application form must be prepared and submitted to the Airport Authority Identification Office.
 - b. Badge applications must be completed before badges will be issued. Employees should be instructed to print all information clearly and legibly. After an employee completes the employee and applicant portions of the application, certification by a designated MSCAA Approved Certifying Official is required.
 - c. Access is limited to only those restricted areas predicated on the Contractor's duties determined by the Development and Operations Divisions.
 - d. The Aviation Transportation Security Act (ATSA), which was passed by Congress on November 19, 2001, changed the requirements for SIDA access by requiring immediate fingerprint based background checks of all persons applying for and currently with unescorted SIDA access.

In addition, the number of disqualifying criminal offenses has increased. (See Attachment) The fingerprint based check must be complete and not reveal any disqualifying crimes in the last 10 years prior to any applicant receiving unescorted access to the SIDA.

- e. For employees unable to produce a legible set of fingerprints, they will submit to a manual criminal history check by the TSA. The process will take 30 days or more.
2. Airport Security Briefing
- a. Each employee requesting an Airport identification badge must attend a security training class. This briefing is conducted Monday through Friday. Contact the Airport Authority Identification Office at 922-8005 for the correct time.
3. Accountability
- a. In accordance with TSA guidelines, no more than 5% of identification badges issued by the Airport Authority can be unaccounted for at any time. A badge is considered unaccounted for if it is lost, stolen or not returned. If 5% of issued identification badges are unaccounted for, all badges must be reissued. Contractors will be assessed a fee for each badge leading to this reissuance. See Section 3.04, Identification Requirements, paragraph H.1.h below for the applicable fee.
 - b. Federal regulations require immediate notification of employee terminations and lost badges to the operator in charge of deleting access privileges, which, in our case, would be the Control Center, 922-8298.
 - c. When the Contractor has reason to believe that the terminated employee may pose a threat to the Airport or air carrier operations, the Contractor is responsible to immediately notify the Airport Authority Identification Office in person, via telephone, or in writing whichever is most expeditious.
 - d. Routine termination of employee access authority will be accomplished by the Airport Authority Identification Office **within 8 hours** of notification. The identification badge must be returned to the Airport Authority Identification Office or the Airport Authority Security Coordinator **within 24 hours** of employee dismissal or resignation. Identification cards recovered from the employee at the time of routine termination are considered to be denied access.
 - e. It is the Contractor's responsibility to retrieve the Airport identification badge IMMEDIATELY upon an employee's termination (voluntary or involuntary), transfer, retirement, death, reassignment, or completion of work assignment.
 - f. Reportedly lost or stolen identification badges must be thoroughly investigated and closely scrutinized. Replacement Identification badges will be issued only upon written request from the employer. Such request must be on company letterhead stationary, must state the circumstances surrounding the loss, and must be signed by an authorized company representative on file with the Airport Authority. A fee will be charged for a lost badge.
 - g. Identification badges shall be valid only during the term of the contract for which it is issued.

- h. If the Airport Authority Identification Office receives notification from an outside source (e.g. Airport Police Department, etc.) that immediate denial should be enacted, then our office will contact the proper company officials to notify them of the change that is being requested.

H. Identification Badge Fees.

1. After the Contractor meets all requirements, the Airport Authority shall issue the Contractor's employees automated photo identification badges for the following fees. Payment must be made according to the arrangement made with the Finance Division as indicated on the badge application. The following fees will be implemented as of September 1, 2018.

- a. Fingerprint Fee (required initially and every two years)\$27.00
- b. Fingerprint Admin Fee\$10.00
- c. Initial ID Badge (Includes \$11 lifetime STA fee)\$25.00
- d. Deposit Per Badge \$100.00
- e. Badge Renewal Fee\$10.00
- f. 1st Lost Badge Fee (Refund of \$50 upon return)\$100.00
- g. 2nd Lost Badge Fee (Refund of \$75 upon return)\$150.00
- h. 3rd Lost Badge Fee (Refund of \$100 upon return).....\$200.00*
- i. Non-Returned Badge\$100.00
- j. Badge Replacement\$10.00
- k. Damaged BadgeNo Charge

*Requires meeting with Project Manager and Security Coordinator before identification badge can be replaced.

2. Deposits.

- a. Badge deposits are due prior to the release of any badges.
- b. Payments may be made by check, money order or cashier's check. Absolutely no cash will be accepted.
- c. The fee for expired badges will be deducted from the deposit until the badge is returned. If an update for the expired badge is requested, the Contractor must bring the amount on deposit to \$100 before the badge can be released.
- d. Deposits will be reimbursed to the Contractor upon receipt of the identification badges once a project has been completed or badging is no longer required.

3. Employees challenged in the Airport Restricted Areas without an Airport Identification Badge PROPERLY DISPLAYED will be transported to the Airport Police Office where a fine of \$25.00 will be assessed and access authority removed for a minimum of 5 days. FINES NOT PAID WITHIN 14 DAYS OF THE VIOLATION WILL RESULT IN THE SUSPENSION OF THE EMPLOYEE'S ACCESS TO AIRPORT RESTRICTED AREAS.

I. Airport Access Gate Control.

- 1. At the Contract preconstruction conference a specific airfield security gate will be designated in writing for Contractor ingress and egress to and from the construction site. The Contractor's, suppliers, and subcontractors are required to use **only** this gate unless designation is made in writing by the Director of Operations and Public Safety, authorizing use of a different gate.
- 2. Under normal circumstances the designated access gate will be manned by security personnel under contract with the Airport Authority. These gates are manned only during

specific hours. Contractors scheduling work are required to coordinate with the Construction Security Coordinator, 922-8021, a minimum of 24 hours in advance of required gate use.

3. If a gate other than the regular construction gate is necessary, the Contractor must provide a guardhouse for the Airport security guard. If the Airport Authority does not have a portable guard house available for the Contractor's use, the Contractor will be required to furnish a guard house which meets the requirements as set forth in Exhibit B.
4. The Contractor will submit a projected estimate of the guard services required for the following week. This projection must be submitted by noon each Thursday to the Security Coordinator. (Exhibit C)

J. Clearance Procedures.

1. Gate guards will perform the following procedures for all persons requesting entrance into restricted areas:
 - a. The guard will take possession of the badge of each person entering an access gate.
 - b. The photo is checked against the holder.
 - c. The badge information is checked against the stop list.
 - (1) If a badge is on the stop list the guard will retain the badge and notify the Airport Police.
 - d. Expiration date is checked to ensure that the badge has not expired.
 - e. The vehicle will be checked for an authorizing decal, debris and unauthorized items. A request to enter a restricted area IMPLIES CONSENT TO SEARCH.
 - f. The person or vehicle (if applicable) will be logged in by entering name, employer, destination, license number, time in and badge expiration date.
 - g. Clear persons to be escorted (if required) to destination.
2. Under special circumstances, Contractors may have airfield security gates designated for their contract use, which are not manned by security personnel. In this event the Airport Authority, with the concurrence of the TSA, will furnish the Contractor with written requirements for the control of authorized access gates proper to the beginning of any construction.

K. Escorts Into An Airport Restricted Area.

1. Contractors who do not have a valid Airport identification badge wishing to enter a restricted area must be escorted by a person holding a valid Airport identification badge.
2. All vehicles operated in a restricted area must either be driven by or escorted by a person holding an Airport identification badge and an Airport Driver's Permit.

L. Operating Without Escort.

1. The Airport Authority will take under consideration, on a case-by-case basis, the issuance of an Airport Driver's Permit to one project supervisor on each shift. The Contractor will be required to justify, in writing to the Director of Public Safety, the need for unescorted vehicle movement. This Airport Driver's Permit does not permit the holder to escort other vehicles.
2. If a Contractor is authorized by the Airport Authority to provide their own vehicle escorts, the Airport Police will conduct the necessary training. This training will consist of approximately 16 hours of classroom and practical exercises.

M. Exiting Restricted Areas.

1. Construction workers must exit the same gate they entered.
2. Upon exiting the restricted area, vehicles may be required to stop and all persons in the vehicle may be required to present an Airport photo identification badge to the gate guard.

3.05 VEHICLE PARKING AND OPERATION

A. General.

1. All streets on the Airport shall have the status of dedicated city streets for the purpose of traffic enforcement.
2. Motor vehicles operated on the public roadways and parking lots of the Airport shall be governed by the traffic ordinance of the city and state laws applicable and, in addition thereto, the following regulations shall be applicable.

B. Traffic Rules and Regulations in the Air Operations Area.

1. The driver of any motor vehicle operating within the Airport boundary shall comply with the lawful orders, signals or directives of Airport Police Officers.
2. All drivers operating motor vehicles within the Airport boundary must possess a valid state driver's license.
3. Only drivers possessing a valid Airport Driver's Permit issued by the Airport Authority are authorized to operate any motorized vehicle unescorted on the AOA of Memphis International Airport. (The Security Coordinator may designate certain construction areas as void of this requirement)
4. Riding on trailer hitches, fenders, or on any portion of a vehicle not equipped with proper seats, running boards, or handholds is prohibited. Standing up in a moving motor vehicle, riding outside of a moving motor vehicle, or riding with arms or legs protruding from the body of the vehicle is prohibited.
5. All vehicle lights shall be lighted during the hours of darkness or during the time of reduced visibility when said vehicle is being operated in the restricted area.
6. No person shall operate any motorized vehicle when vision is restricted due to the load being carried, or for any other reason.
7. No person under the influence of alcoholic beverages or narcotic drugs shall operate any motor vehicle or motorized equipment on the Airport.
8. It shall be the responsibility of the operator to ascertain that the vehicle is in good operating condition. Operators are required to check proper operation of the vehicle's brakes before commencing any operation on airport.
9. Vehicles dripping oil, gasoline, water, or debris of any kind, shall be restricted.
10. Pedestrians and aircraft shall at all times have right-of-way over vehicular traffic. All vehicles must pass to the rear of taxiing aircraft.

C. Radio Equipment.

1. All vehicles operating in the aircraft movement area must be equipped with a two-way radio and, when the movement area is being controlled, be in continuous communication with the Control Tower, unless being escorted by authorized escort vehicle.
2. The installation of two-way radios does not permit the operation of vehicles on the Airport without proper authorization of the Director.

D. Contractor Employee Parking.

1. Employee parking is not available on the job site. The Contractor must provide for remote parking for employees and transport them to the job site.

E. Authorized Contractor Vehicles.

1. Unless otherwise authorized, the Contractor and each subcontractor shall be permitted to have no more than one (1) vehicle per trade on the job site. All Contractor vehicles authorized access to Airport restricted areas shall be:
 - a. Owned or hired by the Contractor or subcontractor;
 - b. Insured under company policy;
 - c. On a pre-approved list; and
 - d. Marked in accordance with Airport regulations.
2. Passenger type vehicles, including pickup trucks, must have the company name displayed on each front door of the vehicle. The company name must be readable, but at a minimum (the letter size shall be 4.5"). The vehicle must display the appropriate Airport registration decal. Specialized equipment such as bulldozers, cranes, etc., will be exempted from this requirement.
3. Cranes used during daylight hours shall have a red flag affixed to the top of boom. Cranes shall have a red obstruction light on the top of boom when used at night. Crane booms shall not be left erect when not in use or following end of workday.

F. Emergency Vehicles and Conditions.

1. Any person operating a motor vehicle on the air operations area shall immediately yield the right-of-way to the police, ambulance, fire department, or other emergency vehicle giving an audible or visual signal or as otherwise directed by an Airport law enforcement officer or fire/rescue department personnel.
2. Emergency conditions existing on the air operations area will not mitigate or cancel existing regulations for non-emergency vehicles in areas not affected by the emergency.
3. Under emergency conditions such as an aircraft accident or fire, access to the scene is denied to all vehicles or persons except those whose duties require their presence. Permits and licensing shall be rendered invalid in the area of emergency conditions and the Airport Authority shall determine when normal operations may be resumed.

G. Passing Aircraft.

1. All vehicles shall pass to the rear of taxiing aircraft and shall pass no nearer than 20 feet horizontal distance.

H. Passenger Concourse.

1. No motorized vehicles or carts of any type shall be used in any concourse or terminal lobby unless approved by the Director.
2. No vehicle or motorized equipment shall be driven under concourses except at authorized vehicle pass-throughs designated by the Director.

I. AOA Driving Lanes.

1. Vehicles on the aircraft parking apron at the terminal and air cargo buildings shall be operated within the marked driving lanes and in compliance with marked traffic control signs except for the following:
 - a. Authorized vehicles engaged in parking apron repair and inspection; and
 - b. Vehicles exceeding a width of 12 feet which shall follow marked lanes as closely as possible.
2. Vehicles shall enter and exit designated driving lanes at a point nearest to the origin and destination.
3. No vehicles or equipment shall be parked in a manner as to obstruct any portion of the driving lanes.

J. Taxiing Aircraft.

1. Vehicles shall yield to taxiing aircraft or aircraft under tow.

K. Speed Limits.

1. No person shall operate a motor vehicle or other motorized equipment at a speed greater than the following:
 - a. Five miles per hour in designated drives under the terminal;
 - b. Fifteen miles per hour on paved service roads in the vicinity of the terminal and air cargo buildings; or
 - c. Twenty-five miles per hour on all aprons or ramps unless the area has an otherwise posted speed limit.
 - d. Fifteen miles per hour on all aprons or ramps at General DeWitt Spain Airport and Charles W. Baker Airport unless the area has an otherwise posted speed limit.

L. Inspection of Vehicles.

1. Contractors authorized to operate vehicles on the air operations area shall be responsible for ensuring that each motor vehicle is inspected at least each 12 months by a qualified mechanic, is in good mechanical condition and has all the required safety equipment.
2. The Contractor shall remove from service any vehicle, which, in the opinion of the Director, is defective and in need of repair and said vehicle will not be returned to service until properly repaired.

M. Violations of Restricted Area Traffic Regulations.

1. The penalties for a violation of restricted area traffic regulations shall be as follows:
 - a. First offense within any 12-month period: retraining;

- b. Second offense within any 12 month period: retraining and fine not to exceed \$50.00;
 - c. Third offense within any 12 month period: retraining and fine not to exceed \$100.00; and
 - d. Fourth offense within any 12 month period: revocation of privilege to drive in restricted area (unescorted or escorted).
 2. The above set penalties do not negate the right of the Airport Authority to immediately revoke driving privileges, dependent upon the seriousness of the violation.
- N. Vehicle Registration.
 1. The Contractor shall list all construction vehicles requiring passage through the access gate on the "AOA Access Decal Request Form," which will be provided upon request.
 2. Each vehicle approved will be issued a windshield decal, which must be affixed to the driver's side of the windshield. This decal is not transferable. Only those vehicles so marked will be allowed through the access gate with the following exceptions:
 - a. dump trucks;
 - b. concrete trucks;
 - c. vehicles making deliveries; and
 - d. cranes, tractor, etc.
- O. Delivery Vehicles.
 1. Each day the Contractor shall give the access gate guard a written list of deliveries expected. No delivery will be cleared into the restricted area unless it is on the list or the construction supervisor is contacted for clearance.

3.06 GENERAL INFORMATION

- A. Access to Public Facilities.
 1. Contractor employees are not authorized to use public facilities, (i.e., rest rooms, eating facilities, boarding gate hold rooms or other public areas of the terminal), except as specifically authorized by the Airport Authority and as necessary for access to job site.
 2. Contractors shall provide adequate rest room and break facilities within the job site and staging areas as appropriate.
 3. All public areas authorized for use by the Contractor's employees are to be kept in a clean and sanitary manner, free of all construction debris.
- B. Accident Reports.
 1. All persons involved in any accident whether personal injury, aircraft or automotive, occurring on Airport property, shall make a full report to the Airport Police (922-8298) as soon after the accident as possible. The report shall include, but not be limited to, the names, addresses of all principals and witnesses, if known, and a statement of the facts. Construction accidents fall under this category
 2. To request paramedics call 922-8333.

- C. Airport Rules and Regulations.
1. The Contractor shall conform to the "Memphis-Shelby County Airport Authority Rules and Regulations."
 2. The Contractor shall conform to "Memphis-Shelby County Airport Authority's Air Operations Area Rules and Regulations and its Airport Security Program."
- D. Alcoholic Beverages and Narcotic Drugs.
1. No person shall have any alcoholic beverages or narcotic drugs on Airport property.
- E. Damages.
1. Contractors shall be fully responsible for all damages to buildings, equipment, real property and appurtenances in the ownerships or custody of the Airport Authority caused by negligence, abuse or carelessness on the part of their employees, agents, customers, visitors, suppliers or persons with whom they do business.
- F. Disorderly Conduct.
1. No person shall commit any disorderly, obscene or indecent act nor commit any nuisance.
 2. Abusive behavior by Contractor supervisors or their employees will not be tolerated.
- G. Debris and Cleanup.
1. No person shall dispose of any garbage, trash, refuse or any other material on the Airport except in the receptacles provided for that purpose.
 2. No person shall dispose of any fill or building materials or any other materials on Airport property except in such areas as are specifically designated by the Director.
 3. Contractors are responsible for the cleanliness of the job site and access to the job site as appropriate. All Contractors must establish an active ongoing program to eliminate any foreign objects which may cause damage to aircraft or cause personal injury to other persons. Contractors must pay particular attention to haul routes used to and from the job site to clean up any debris which may be tracked onto or dropped on the air operations area. Contractor will immediately remove such debris to eliminate the hazard. **END OF THE WORKDAY CLEANUP WILL NOT SUFFICE.** Cleanup shall be done to the satisfaction of the Airport Authority. All Active taxiway crossings and work areas adjacent to the taxiways shall be kept clean.
 4. If it should become necessary for the Airport Authority to remove debris left by a Contractor, the Contractor shall be billed at 2 1/2 times the actual cost of the cleanup or a minimum of \$250 per trip whichever is greater.
- H. Firearms and Explosives.
1. No person shall have any firearm, explosive or incendiary device on or about their person or accessible property while on Airport property.

I. Fire Equipment.

1. All Contractors shall supply and maintain adequate and readily accessible fire extinguishers for the particular hazard involved as directed by the Airport Authority or the Fire Marshal. All fire apparatus shall be maintained in first class operable condition.
2. The Contractor shall maintain the following items on site:
 - a. Two-pound dry chemical extinguisher, or
 - b. Four-pound carbon dioxide extinguisher.
3. Carbon tetrachloride chlorobromethene or other vaporizing liquid extinguishers are not permitted inside buildings due to their high toxicity unless approved in writing by the Fire Marshal.

J. Gambling.

1. No person shall conduct gambling in any form or operate gambling devices anywhere on Airport property.

K. Hazards.

1. No person shall use flammable volatile liquids having a flash point of less than 100°F in cleaning of parts, appliances, or for any other purpose unless such operations are conducted in the open air not within 50 feet of an aircraft, away from structures and equipment or in properly ventilated, approved paint booths.
2. No person shall keep or store any flammable liquids, gases, oil, oil wastes, flares, paints, or other similar material in any building within the Airport boundary except that such materials may be kept in specially provided rooms or receptacles approved by the Fire Marshal.
3. Contractors shall provide suitable metal receptacles with covers for the storage of wastes, rags, or other rubbish.
4. No person shall start any open fires of any type, including flare posts, torches or fires in containers formerly used for oil, paint, or similar materials on any part of an Airport without permission of the Director.

L. Picketing and Public Demonstrations.

1. Subject to applicable federal, state and local regulations and laws, no persons shall walk in a picket line as a picketer or take part in any labor or other public demonstration on any Airport property or facilities therein except in those places which may be specifically assigned for use of such picket lines or other public demonstration by the Director.

M. Restricted Areas.

1. No persons shall enter any area posted as being restricted or closed to the public except for the following:
 - a. Persons assigned to duty therein;
 - b. Persons authorized by the Director; or
 - c. Persons under contractual agreement with the Airport Authority or tenants of the Airport Authority.

2. All persons in restricted areas of Memphis International Airport must be duly authorized and must have displayed on their person an official identification badge which will clearly establish the individual by name, contractor affiliation, and construction project completion date.
 3. The identification badge must be worn on the outermost garment above the waist except in those cases where there exists an overriding safety consideration approved by the FAA.
- N. Signs on the Airport.
1. Signs may not be installed in public view on the Airport without prior approval of the Airport Authority. Proposals should be documented and submitted to the Airport Authority with an accompanying sketch depicting the general appearance and location of the desired sign, and the name and telephone number of an individual to contact.
- O. Smoking.
1. No person shall smoke or carry lighted cigars, cigarettes, pipes, matches or any naked flame in or on any fuel storage areas, Air Operations Area, public aircraft parking and storage area, in any other place where smoking is specifically prohibited by signs or upon any open space within 50 feet of any fuel carrier which is not in motion. Smoking by tank vehicle drivers, helpers, repairmen, or other personnel is prohibited while they are driving, making deliveries, filling or making repairs to tank vehicles. No person shall smoke or permit any open flame within 100 feet of any aircraft undergoing fuel service or within at least 50 feet of any hangar or building.
- P. Storage of Equipment.
1. Contractors shall store or stock material or equipment in a neat and orderly manner and in a manner not to constitute a hazard to personnel or property.
- Q. Trash Containers.
1. Areas to be used for trash and garbage containers shall be designated by the Director and no other areas shall be used. Only trash containers approved by the Director shall be used by contractors for the collection of trash and garbage. The placement of trash or garbage outside approved containers is strictly prohibited.
- R. Utilities.
1. The following instructions must be adhered to without exception:
 - a. No contractor or employee for any craft shall turn off any utilities without contacting the Airport Authority. This includes water, electrical and HVAC;
 - b. No one shall open any electrical substations, distribution or motor control centers without first notifying the Airport Authority. No branch circuits shall be turned off or on, without obtaining permission from the Airport Authority; and
 - c. No one shall turn off the water or the HVAC or open any drain lines without notifying the Airport Authority.
 2. All notifications for utility disruption must be made through the Airport Authority and must be made a minimum of 24 hours prior to scheduled shutoff.

3. The Airport Authority has a responsibility to keep the Airport in operation; it is your responsibility to conform to the above instructions. You may contact the Airport Authority.

FOR ANY QUESTIONS CONCERNING SECURITY REGULATIONS CONTACT THE SECURITY COORDINATOR AT 901/922-8021.

END OF SECTION 00802

EXHIBIT B**GUARD HOUSE SPECIFICATIONS**

1. No less than 5' x 8'
2. Heated, air conditioned and lighted
3. Counter or table (minimum size 16" x 36")
4. House must have two doors to allow guards to check entering and exiting vehicles.
5. Windows on all sides, large enough for guard to observe restricted areas from a seated position.
6. Chair with turning radius of 360 degrees, at a height which allows guards to observe restricted areas through windows.
7. Trash can (dumping daily responsibility of Contractor)

PORTABLE TOILETS

1. Daily cleanliness responsibility of Contractor
2. Restricted to guards only. NO CONSTRUCTION PERSONNEL PERMITTED.

PLACEMENT OF GUARD HOUSES AND PORTABLE TOILETS


1. Area to be designated by Airport Authority
2. Clear Accessibility (paved or gravel)

The Contractor is responsible for supplying and maintaining power source for the guard houses. The contractor is also responsible for maintaining the heating and cooling of same.

END OF EXHIBIT B

EXHIBIT C

CONTRACT SECURITY SERVICE PROJECTION FORM (.PDF VERSION IS AVAILABLE)



CONTRACT SECURITY SERVICE PROJECTION FORM

CONSTRUCTION

A CONTRACT SECURITY SERVICE PROJECTION FORM SHOULD BE SUBMITTED TO THE AIRPORT SECURITY COORDINATOR EACH THURSDAY NO LATER THAN 12:00 PM FOR THE FOLLOWING WEEK. CONTRACT SECURITY SERVICES MAY NOT BE AVAILABLE IF AN ACCURATE PROJECTION FORM IS NOT RECEIVED ON TIME. IF YOU HAVE ANY QUESTIONS CONTACT THE MSCAA SECURITY COORDINATOR AT 901-922-8021 OR EMAIL @ CRROBINSON@LYMEMPHIS.COM.

IMPORTANT NOTE: THIS FORM MUST BE FILLED OUT COMPLETELY & SIGNED PRIOR TO SUBMITTAL.

PROJECTED SCHEDULE FOR THE WEEK OF:	SCHEDULE				
COMPANY NAME:	DAY	DATE	OPEN TIME	CLOSE TIME	SIGN IN TIME <small>(FOR ORIGINAL USE ONLY)</small>
PROJECT NAME:	SUNDAY				
PROJECT NUMBER:	MONDAY				
LOCATION:	TUESDAY				
POINT OF CONTACT:	WEDNESDAY				
PHONE#:	THURSDAY				
	FRIDAY				
	SATURDAY				

IMPORTANT NOTE: A 24 HOUR NOTICE IS REQUIRED FOR ANY CHANGES TO A SUBMITTED SCHEDULE.

COMPANY AUTHORIZED SIGNATORY AUTHORIZATION/VERIFICATION

(LAST NAME)

(FIRST)

(MI)

(SIGNATURE)

(COMPANY)

(DATE)

(CONTACT TEL #)

ALL REQUESTS FOR SERVICE MUST BE MADE BY AN AIRPORT AUTHORIZED SIGNATORY

CS FM03 – CONTRACT SECURITY SERVICE PROJECTION FORM

END OF EXHIBIT C

Part 1 – 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:

Paragraph Number	Term	Definition
10-01	AASHTO	The American Association of State Highway and Transportation Officials.
10-02	Access Road	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
10-03	Advertisement	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
10-04	Airport	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.
10-05	Airport Improvement Program (AIP)	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
10-06	Air Operations Area (AOA)	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.
10-07	Apron	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
10-08	ASTM International (ASTM)	Formerly known as the American Society for Testing and Materials (ASTM).

Paragraph Number	Term	Definition
10-09	Award	The Owner's notice to the successful bidder of the acceptance of the submitted bid.
10-10	Bidder	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
10-11	Building Area	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.
10-12	Calendar Day	Every day shown on the calendar.
10-13	Certificate of Analysis (COA)	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
10-14	Certificate of Compliance (COC)	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.
10-15	Change Order	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.
10-16	Contract	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. 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.
10-17	Contract Item (Pay Item)	A specific unit of work for which a price is provided in the contract.
10-18	Contract Time	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

Paragraph Number	Term	Definition
		completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.
10-19	Contractor	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.
10-20	Contractors Quality Control (QC) Facilities	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
10-21	Contractor Quality Control Program (CQCP)	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.
10-22	Control Strip	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
10-23	Construction Safety and Phasing Plan (CSPP)	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.
10-24	Drainage System	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
10-25	Engineer	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.
10-26	Equipment	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.
10-27	Extra Work	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

Paragraph Number	Term	Definition
		Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.
10-28	FAA	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
10-29	Federal Specifications	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
10-30	Force Account	<p>a. Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p>b. Owner Force Account - Work performed for the project by the Owner's employees.</p>
10-31	Intention of Terms	<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>
10-32	Lighting	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.
10-33	Major and Minor Contract Items	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

Paragraph Number	Term	Definition
		20% of the total amount of the award contract. All other items shall be considered minor contract items.
10-34	Materials	Any substance specified for use in the construction of the contract work.
10-35	Modification of Standards (MOS)	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
10-36	Notice to Proceed (NTP)	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.
10-37	Owner	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 Memphis-Shelby County Airport Authority .
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.
10-39	Pavement Structure	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
10-40	Payment bond	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.
10-41	Performance bond	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.
10-42	Plans	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.'

Paragraph Number	Term	Definition
10-43	Project	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
10-44	Proposal	The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.
10-45	Proposal guaranty	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.
10-46	Quality Assurance (QA)	Owner's responsibility to assure that construction work completed complies with specifications for payment.
10-47	Quality Control (QC)	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
10-48	Quality Assurance (QA) Inspector	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.
10-49	Quality Assurance (QA) Laboratory	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.
10-50	Resident Project Representative (RPR) / Program Manager	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. RPR and Program Manager are used interchangeably.
10-51	Runway	The area on the airport prepared for the landing and takeoff of aircraft.
10-52	Runway Safety Area (RSA)	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the

Paragraph Number	Term	Definition
		construction safety and phasing plan (CSPP) for limits of the RSA.
10-53	Safety Plan Compliance Document (SPCD)	Details how the Contractor will comply with the CSPP.
10-54	Specifications	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 contract specifications by reference shall have the same force and effect as if included in the contract physically.
10-55	Sponsor	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.
10-56	Structures	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.
10-57	Subgrade	The soil that forms the pavement foundation.
10-58	Superintendent	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.
10-59	Supplemental Agreement	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.
10-60	Surety	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

Paragraph Number	Term	Definition
10-61	Taxilane	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
10-62	Taxiway	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.
10-63	Taxiway/Taxilane Safety Area (TSA)	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
10-64	Work	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.
10-65	Working day	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.
10-66	Owner Defined terms	See Section 150 General Provisions Addendum for additional terms.

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). See specification section 00100, Legal 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*.

See sections C-105, 00405, and 01100 for information on Mobilization.

A Virtual Pre-Bid/Proposal Meeting will be held Friday, October 15, 2021, at 9:00 a.m. local time via phone/video conferencing (link: <https://us06web.zoom.us/j/87242949125?pwd=L0t5ZjYzbVhuamJ3SVVmRm1jOFBjZz09>; phone: (312) 626 6799; meeting ID: 872 4294 9125; passcode: 121842). Instructions on Pre-Bid/Proposal Meeting and Site Visit request can be found at <https://www.flymemphis.com/rfps-rfqs>. Attendance at the Pre-Bid/Proposal Meeting is strongly recommended.

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. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

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 or by fax or email 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

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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 ninety (90) 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 fifteen (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

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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. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

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. NOT APPLICABLE

50-05 Cooperation of Contractor. The Contractor shall be supplied with one (1) hard copy 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.

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.

See Section 01321 for additional surveying requirements.

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. 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 and is indicated as follows: NONE

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 the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is on sheets G-PH-01 to G-PH-05 of the project plans.

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.

70-15.1 FAA facilities and cable runs. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Owner a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

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. See Article 19 of Section 00500 Construction Contract.

END OF SECTION 70

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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 twenty-five (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 ten (10) days of the NTP date. The Contractor shall notify the RPR at least 24 hours (24) 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 and will therefore be closed to aircraft operations intermittently as follows: N/A

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:

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.

Schedule	Liquidated Damages Cost	Allowed Construction Time
Substantial Completion	\$1,000 per calendar day	217 calendar days
Final Completion & Demobilization Phase	\$500 per calendar day	45 calendar days

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the 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
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	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.

Term	Description
Measurement by Volume	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 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.
Asphalt Material	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.
Cement	Cement will be measured by the ton (kg) or hundredweight (km).
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	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.
Plates and Sheets	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.
Miscellaneous Items	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.
Scales	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. 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

Term	Description
	<p>scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</p> <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>
Rental Equipment	<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>
Pay Quantities	<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. Retainage will not be withheld on this project. No retainage will be withheld by the Owner from progress payments due the prime Contractor. Retainage by the prime or subcontractors is prohibited, and no retainage will be held by the prime from progress due subcontractors.
- 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. 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 project 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.

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.

See technical specifications for additional equipment with extended warranties.

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 (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within fourteen 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.

See Section 01770 for additional closeout procedures.

END OF SECTION 90

Section 150 General Provisions Addendum

150-10 GENERAL PROVISIONS ADDENDUM - Section 10 Definition of Terms

Whenever the following terms are used in these specifications, in the contract, in any documents or other instruments pertaining to construction of the project where these specifications govern, the intent and meaning shall be interpreted as follows; and whenever one of the following capitalized words, terms or phrases is used herein, it shall be interpreted or construed first as defined in Specification Section GP-10, second as defined below, third according to its generally accepted meaning in the construction industry, and fourth according to its common and customary usage.

150-10-101 ACCESS ROAD

As defined in GP-10 and shall further be defined to include “or an internal roadway for construction or maintenance.”

150-10-102 ADDENDA

Written or graphic instructions issued prior to the opening of Proposals, which clarify, correct or change the bidding documents or the Contract Documents.

150-10-103 AIRPORT OPERATIONS or OPERATIONS

Depending on use, airport operations may refer to a department of the Airport Authority or the movement of aircraft on, or approaching the airfield.

150-10-104 BID ITEMS

The proposal provides for quotation of a price, for one or more bid items, which may be lump sum bid prices, alternate bid prices, unit bid prices, or a combination thereof. No payment will be made for items not set up in the proposal, unless otherwise provided by contract amendment. Bidders are cautioned that they should include in the prices quoted for various bid items all necessary allowances for the performance of all work required for the satisfactory completion of the project.

150-10-105 BUILDER

A term to be used interchangeably with “Contractor.”

150-10-106 CONTRACT AMENDMENT

A term to be used interchangeably with “Change order.”

150-10-107 CONTRACT FOR PROFESSIONAL SERVICES

A written agreement between the Owner and a Professional for provision of services and related items required to design, engineer or program manage all or part of a Project.

150-10-108 DEFECTIVE

An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any Inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to the Program Manager's recommendation of final payment.

150-10-109 DRAWINGS

A term to be used interchangeably with "Plans."

150-10-110 ENGINEER or PROFESSIONAL

As defined in GP-10 and shall further be defined to include "Engineer will not supervise, direct, control, or have authority over or be responsible for Contractors means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with laws and regulations applicable to performance of the Work. Renaissance Group is the Engineer for this Project."

150-10-111 FINAL COMPLETION

The stage of construction when the Work has been 100% completed including all punch list items, record drawings, O&M manuals, lien waivers, maintenance training, warranties, consent of surety to final payment, and all other required closeout documentation.

150-10-112 GP

Abbreviation for General Provision.

150-10-113 HAZARDOUS SUBSTANCES

The term "Hazardous Substance" shall have the same meaning and definition as set forth in the Comprehensive Environmental Response Compensation and Liability Act as amended, 42 U.S.C. § 6901 *et seq.*, and regulations promulgated thereunder (collectively "CERCLA") and any corresponding state or local law or regulation, and shall also include: (a) any Pollutant or Contaminant as those terms are defined in CERCLA; (b) any Solid Waste or Hazardous Constituent as those terms are defined by, or are otherwise identified by, the Resource Conservation and Recovery Act as amended, 42 U.S.C. § 6901 *et seq.*, and regulations promulgated thereunder (collectively "RCRA") and any corresponding state or local law or regulation; (c) crude oil, petroleum and fractions of distillates thereof; (d) any other material, substance or chemical defined, characterized or regulated as toxic or hazardous under any applicable law, regulation, ordinance, directive or ruling; and (e) any infectious or medical waste as defined by any applicable federal or state laws or regulations.

150-10-114 INTENTION OF TERMS

As defined in GP-10 and shall further be defined to include "The use of any such term shall not be effective to assign to Program Manager any duty or authority to supervise or direct the furnishing or performance of the work. Wherever in the specifications or on the drawings the words "install," "furnish," "provide," or words of like import are used, they mean the Contractor shall install, furnish, or provide, as the case may be complete and ready for Owner's use."

150-10-115 LUMP SUM PRICE

The dollar amount for which a Contractor agrees to perform the Work or a specific component of the Work as set forth in a Contract for construction.

150-10-116 MAJOR SUBCONTRACTOR

A major subcontractor shall be any subcontractor who is responsible for 15 percent or more of the full amount of the contract.

150-10-117 OWNER or SPONSOR

As defined in GP-10 and shall further be defined to include "The Owner shall mean the Memphis-Shelby County Airport Authority."

150-10-118 PARTIAL COMPLETION

The stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents when the Owner can satisfactorily occupy or beneficially use a finite portion of completed Work for its intended purpose. Partial completion and acceptance of a finite portion of the work will in no way imply the overall project is substantially complete or start of the project warranty.

150-10-119 PROGRAM MANAGER

The individual, partnership, firm, or corporation duly authorized by the Owner (sponsor) to be responsible for engineering supervision during construction and acting directly or through an authorized representative. The term Program Manager means the person, person or organization named by the Owner to act as their representative. Program Manager will not supervise, direct, control, or have authority over or be responsible for Contractors means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with laws and regulations applicable to performance of the Work. All authority granted to the Engineer by these construction documents shall also be available to the Program Manager, at the discretion of the Owner. Memphis-Shelby County Airport Authority is the Program Manager for this Project.

150-10-120 PUNCHLIST ITEM

Any item of work, in whole or in part, which the Program Manager has identified as being unsatisfactory after an inspection of the project. A punch-list item may be further classified as being either "major" or "minor". A "major" punch-list item is defined as any punch-list item the correction of which is, in the Program Manager's determination, necessary for the Owner to use the completed project for its intended purpose. A "minor" punch-list item is defined as any punch-list item not classified as "major" by the Program Manager.

150-10-121 SHOP DRAWINGS

All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a supplier, manufacturer, subcontractor or fabricator and submitted by the Contractor to illustrate material or equipment for some portion of the Work.

150-10-122 SITE

The geographical location of a Project, usually defined by legal boundary lines, and the location characteristics including, but not limited to, grades and lines of streets, alleys, pavements and adjoining structures, rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, existing buildings and improvements, and service and utility lines.

150-10-123 SUBSTANTIAL COMPLETION

The stage in the progress of the Work when the Work is substantially complete in accordance with the Contract Documents and the Owner can occupy or beneficially use satisfactorily completed Work for its intended purpose.

150-20 GENERAL PROVISIONS ADDENDUM - PROPOSAL REQUIREMENTS AND CONDITIONS

150-20-01 ADVERTISEMENT (NOTICE TO BIDDERS)

General Provisions 20-01 shall include: “See Section LEGAL NOTICE TO BIDDERS for the ADVERTISEMENT notifying prospective Bidders of this project.”

150-20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES

General Provisions 20-05 shall include: “The proposal provides for quotation of a price, for one or more bid items, which may be lump sum bid prices, alternate bid prices, unit bid prices, or a combination thereof. No payment will be made for items not set up in the proposal, unless otherwise provided by contract amendment. Bidders are cautioned that they should include in the prices quoted for various bid items all necessary allowances for the performance of all work required for the satisfactory completion of the project.”

150-20-07 PREPARATION OF PROPOSAL.

General Provisions 20-07 shall include “The bidder shall state the unit price and extension, written in ink or typed, for which he proposes to do each pay item furnished in the proposal. In case of conflict between the unit price and extension, the unit price, unless obviously incorrect, shall govern.”

150-20-09 IRREGULAR PROPOSALS

General Provisions 20-09 item f) shall include:

- f.** If the proposal does not meet the DBE participation requirement specified in Section DBE REQ.

150-20-10 BID GUARANTEE.

General Provisions 20-10 shall include

“Each proposal shall be accompanied by either a cashier's check or a certified check drawn on a solvent bank, or a Bidder's bond executed by the Bidder and a surety company acceptable to the Memphis-Shelby County Airport Authority, in the amount of not less than five (5) percent of the total bid price, made payable without conditions to the Memphis-Shelby County Airport Authority, as a guarantee that if the proposal is accepted, the Bidder will enter into a contract and execute a Performance and Payment Bond with legally responsible surety within ten (10) days after contract award is made by the Memphis-Shelby County Airport Authority. Bidder's Bond (if used) shall be executed on the form prescribed within these documents.

“In the event that the Bidder's proposal is accepted and the contract is awarded by the Memphis-Shelby County Airport Authority, and the Bidder fails or refuses to execute the contract and furnish the required Performance and Payment Bond within ten (10) days after such award is made by the Memphis-Shelby County Airport Authority, unless given a written extension of time by the Memphis-Shelby County Airport Authority, then the Bidder will be considered as having abandoned his proposal, and his proposal guarantee will be retained by the Memphis-Shelby County Airport Authority as liquidated damages and not as a penalty, IT NOW BEING AGREED that the amount of the proposal guarantee is a fair estimate of the amount of damages that the Memphis-Shelby County Airport Authority will sustain in case the Bidder fails to enter into the contract and furnish the required Performance and Payment Bond within ten (10) days after receiving notice of such award.”

150-20-14 DISQUALIFICATION OF BIDDERS.

General Provisions 20-14 item d) shall include:

- d.** Failure to show evidence of possessing a valid state of Tennessee Contractor's License, as required by law.

150-20-15 EXPLANATIONS AND INTERPRETATIONS OF CONTRACT DOCUMENTS

All explanations desired by Bidders regarding the meaning or interpretation of the drawings and specifications must be requested with sufficient time allowed for a written reply to reach them before the submission of their bids. Oral explanation or instructions will not be given. All necessary explanations or interpretations will be made in the form of written addenda to the specifications or drawings, and will be furnished to all Bidders, and the receipt thereof shall be acknowledged by each Bidder on his proposal.

150-20-16 DBE REQUIREMENTS

All Bidders shall submit with his/her proposal the DBE's Assurance Statement/Letter of Intent for each DBE subcontractor (subcontractors' signatures not required) Subcontractors' bids to the Prime Contractor with items included in the bid either circled and/or highlighted, DBE's Current Certification for each DBE Subcontractor, Respondent DBE Goals Accomplishment Statement, and Information on All Firms that Provide Bids or Quotes, which have been provided in the bid envelope. There must be one DBE's Assurance Statement/Letter of Intent for each proposed DBE subcontractor properly completed and signed by the Bidder.

Within 24 hours of the proposal submittal deadline, all Bidders shall submit the DBE's Assurance Statement/Letter of Intent for each DBE subcontractor (subcontractors' signatures required). There must be one DBE's Assurance Statement/Letter of Intent for each proposed DBE subcontractor properly completed and signed by the DBE subcontractor, and if applicable the 2nd/3rd Tier Subcontractor's, and the Bidder.

See specification section DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS for additional proposal requirements and conditions.

150-40 GENERAL PROVISIONS ADDENDUM - SCOPE OF WORK

150-40-04 EXTRA WORK.

General Provisions 40-04 shall include “When determined by the Program Manager to be in the Owner's best interest, the Owner may order the Contractor to proceed with extra work by time and materials as provided in Section GP-150-90.”

150-50 GENERAL PROVISIONS ADDENDUM - CONTROL OF WORK

150-50-04 COOPERATION OF CONTRACTOR.

General Provisions 50-04 shall include “The Owner shall allocate the work and designate the sequence of construction in case of controversy between contractors.”

150-70 GENERAL PROVISIONS ADDENDUM - LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

150-70-01 LAWS TO BE OBSERVED.

General Provisions 70-01 shall include “Applicable laws, ordinances, regulations, orders, and decrees shall be considered as MINIMUM requirements, and everything shown or specified in excess of these minimum requirements shall be installed in excess thereof, as shown or specified. No instructions given in the contract documents shall be construed as an authorization to violate any law, ordinance, regulation, order, or decree.

“If the Contractor observes that the drawings or specifications are at variance with any applicable law, ordinance, regulation, order, or decree, he shall immediately notify the Program Manager in writing, and obtain the Program Manager's decision before proceeding with the portion of the work involved.

“The Contract shall be governed by the law of the State of Tennessee. Any action brought which involves the Contract, the Work or the Project shall be brought and determined in accordance with the Laws of the State of Tennessee.”

150-70-14 CONTRACTOR'S RESPONSIBILITY FOR WORK

General Provisions 70-14 shall include “The Program Manager shall not be responsible for the methods and means employed by the Contractor in the performance of the Contractor's work. The Program Manager shall have no responsibility for the safety of workmen and others who may be injured during the course of the Contractor's work.”

150-70-21 CONTINUANCE OF WORK NOTWITHSTANDING DISPUTES, ETC.

Unless otherwise agreed in writing, the Contractor shall, notwithstanding any dispute, proceeding, or litigation, proceed forthwith in accordance with the Program Manager's written decision and/or direction and shall continue the Work and maintain its progress. The Owner shall continue to make payments to the Contractor to the extent that the sums due and owing the Contractor are not in dispute, in accordance with the Contract Documents.

150-70-22 SCOPE OF PROGRAM MANAGER'S RESPONSIBILITIES TO CONTRACTOR AND OWNER

The Program Manager is to act as Owner's representative, and shall have the duties and responsibilities and the rights and authority assigned to Program Manager in the Contract in connection with completion of the Work in accordance with the Contract. Neither the Program Manager's authority to act under the Contract, nor any decision made by him in good faith either to exercise or not to exercise authority under the Contract, shall give rise to any duty or responsibility of the Program Manager to the Contractor, any Subcontractor, any of their agents or employees. However, nothing contained herein shall exculpate in any manner nor relieve the Program Manager of his duties and responsibilities to the Owner in accordance with the Contract and in accordance with any other agreements between the Program Manager and Owner establishing the Program Manager's duties and responsibilities to properly administer the Contract and to correctly apply the requirements of the Contract to the Work.

150-80 GENERAL PROVISIONS ADDENDUM - PROSECUTION AND PROGRESS

150-80-01 SUBLETTING OF CONTRACT

General Provisions 80-01 shall include “The Contractor shall obtain prior approval from the Owner before subcontracting any portion of this contract. Only those subcontractors who are known for doing quality, first class airport work of the type required of the subcontract will be approved by the Owner. For each proposed subcontract, the Contractor shall supply the Program Manager with the subcontractor's name, the amount of the subcontract, their previous, related experience, their available appropriate equipment both owned and leased, and their available personnel. The Contractor shall also submit to the Program Manager those items of the contract to be performed directly by his own organization. The amounts of these items and the amounts of all items awarded to all subcontractors shall correspond to the contract price for the entire project. The Owner reserves the right to withhold approval of any subcontractor who, in the Owner's opinion, is not qualified to perform the work. If the Owner withholds approval of a subcontractor the Contractor shall be required to find an alternate subcontractor that meets the approval of the Owner or he shall perform the work himself. In either event, contract pay items shall not be adjusted. The contract will not be signed until all major subcontractors have been approved by the Owner. In case of approval, the Contractor shall file copies of all subcontracts with the Program Manager.”

150-80-07 DETERMINATION AND EXTENSION OF CONTRACT TIME

General Provisions 80-07 shall include “Time extension for delays caused by the effects of inclement weather are justified only when rains or other excessive inclement weather conditions or related adverse soil conditions prevent the Contractor from productively performing critical activities of work resulting in:

1. The Contractor being unable to work at least 50% of the normal work day on pre-determined critical path items due to adverse weather conditions or;
2. The Contractor being required to make major repairs to the work damaged by excessive weather, provided that the damage was not attributable to the Contractor's negligence or failure to perform, and provided that the Contractor was unable to work an available day as defined under GP-10.

“The Contractor will be granted a time extension based on weather days in excess of the anticipated days during the original contract completion. After the new contract completion date has been established by the Program Manager, additional anticipated days as identified by SC-120 Section 3.05 paragraph E for the months covered within the contract extension period will be granted. Once the Contractor reaches the revised completion date and has not completed the project due to additional weather delays, the Contractor will be granted, only the verified lost weather days leading to the revised contract completion. No other weather days will be granted beyond the established final completion date.

“If the Contractor finds it impossible for reasons beyond his/her control to complete the work within the contract time as specified or as extended he may, within ten (10) days after commencement of the cause of delay make a written request to the Program Manager for an extension of time setting forth the reasons which he believes will justify the granting of his/her request; otherwise, such claim will be waived. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Program Manager finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he may recommend the Owner extend the time for completion in such amount as the conditions justify. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion. Should the contract time require extension it shall be by change order or supplemental agreement”

150-80-09 DEFAULT AND TERMINATION OF CONTRACT

General Provisions 80-09 shall include “The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

- a. Cease operations as directed by the Owner in the notice;

- b. Take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- c. Except for the Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Subcontractors and purchase orders and enter into no further Subcontracts and purchase orders.

“In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment from the Owner for Work executed and for proven loss with respect to materials, equipment, tools and construction equipment and machinery, including reasonable overhead, profit and damages.”

150-90 GENERAL PROVISIONS ADDENDUM - MEASUREMENT AND PAYMENT

150-90-05 PAYMENT FOR EXTRA WORK OR TIME AND MATERIALS WORK

General Provisions 90-05 shall include:

“EXTRA Work and TIME and MATERIALS Work will be paid in accordance with the paragraphs below and will include documented costs for labor, labor burden, insurance and taxes, materials, equipment, plus a set allowance for combined overhead and profit to be included in the total cost to the Owner. The Contractor is responsible for preparing detailed daily reports documenting all labor, material, and equipment charges incurred and signed by both Contractor and Program Manager for all TIME and MATERIALS work.

When the change order or supplemental agreement authorizing extra work or time and materials work is prepared, compensation will be based on actual expended labor, equipment, and materials costs as follows:

a. Labor. For all labor (skilled and unskilled) and foremen in direct charge of a specific time and materials item, the Contractor shall receive the rate of wage (or scale) for every hour that such labor or foreman is actually engaged in the specified time and materials work. Such wage (or scale) shall be the same U.S. Secretary of Labor wage determination as is included in the originally awarded contract.

The Contractor shall receive the actual costs paid to, or on behalf of workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.

The Contractor shall submit an audited labor burden percentage for review and approval which, after approval, will also be paid to the Contractor based upon actual labor costs expended. The Contractor's audited labor burden rate will include any and all insurance costs not paid by OCIP, unemployment insurance contributions, and social security taxes paid on the employees behalf. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such insurance and taxes.

c. Materials. For materials accepted by the Program Manager and used exclusively for the Extra or Time and Materials Work, the Contractor shall receive the actual cost of such materials delivered on the work, including transportation charges paid by him (exclusive of machinery rentals as hereinafter set forth) and applicable sales or use tax.

d. Equipment. For any machinery or special equipment (other than small tools) including fuel, lubricants, and transportation costs, the use of which has been authorized by the Program Manager, the Contractor shall receive the current published "Blue Book" rental rates for the actual time that such equipment is committed to the work.

e. Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

The Contractor and the Program Manager shall compare records of the cost of TIME AND MATERIALS WORK at the end of each day. Agreement shall be indicated by signature of the Contractor and the Program Manager or their duly authorized representatives. Failure to obtain the Program Manager's signature shall constitute a waiver on the part of the Contractor of any right to collect reimbursement for such costs.

No payment will be made for work performed on an EXTRA WORK or TIME AND MATERIALS basis until the Contractor has furnished the Program Manager with itemized statements and all required backup documentation of the cost of such extra or time and materials work.

The fixed percentage allowance for combined overhead and profit to be added to the total of the labor, materials, and equipment costs above will be based on the following schedule:

- a. For the Contractor, for Work performed by the Contractor's own forces, ten percent (10%) of the cost.
- b. For the Contractor, for Work performed by the Contractor's Subcontractor, five percent (5%) of the amount due the Subcontractor.
- c. For each Subcontractor or Sub-subcontractor involved, for Work performed by that Subcontractor's or Sub-subcontractor's own forces, fifteen percent (15%) of the cost.
- d. For each Subcontractor, the Work performed by the Subcontractor's Subcontractor, five percent (5%) of the amount due the Subcontractor's Subcontractor.

The total payment will be based on the total documented labor, material, and equipment cost plus the fixed percentages for combined overhead and profit specified above. This total payment shall constitute full compensation for all items of expense not specifically provided for the extra work or time and materials work.

150-90-07 PAYMENT FOR MATERIALS ON HAND

General Provisions 90-07 shall include "Request for partial payments must be accompanied by a completed, accurate stored material work sheet. The stored material work sheet will be supplied by the Program Manager upon request by the Contractor."

END OF SECTION GP-150

Part 2 – General Construction Items

Item C-105 Mobilization

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. See sections 00405 and 01100 for additional information.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster “Equal Employment Opportunity is the Law” in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL “Notice to All Employees” Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 Engineer/RPR field office. An Engineer/RPR field office is not required.

METHOD OF MEASUREMENT

105-5 Basis of measurement and payment.

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 50%.

BASIS OF PAYMENT

105-6 Payment will be made under: See sections 00405 and 01100 for additional information.

END OF ITEM C-105

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DIVISION 1 – SECTION 01100**SUMMARY OF THE WORK, SEQUENCE OF CONSTRUCTION & LIQUIDATED DAMAGES****PART 1 GENERAL**

Related Work:

1. Documents affecting work of this Section include but are not necessarily limited to Division 0 and Division 1 and other Sections of these Specifications.

1.01 SUMMARY**SUMMARY OF WORK**

- A. The "Project," of which the "Work" of this Contract is a part, is titled A Baggage Makeup Carousel Replacement - Design/Build, MSCAA Project 19-1423-10-01.
- B. This project will replace the existing A outbound baggage flat plate carousel with a new sloped plate carousel as well as conveyor system replacement. The scope of work consists removal & replacement of existing conveyor and carousel systems, including necessary associated control components at the Memphis International Airport. The work includes, but is not limited to, electrical modifications, conveyor and carousel equipment installation and other efforts as required. This will be a design/build contract.
- C. Subcontracts: The Contractor shall insert in each of his subcontracts the provisions contained in paragraphs C. and D., of this section and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION**3.01 PROJECT PHASING AND COMPLETION**

- A. This is a fixed-duration Contract required to be substantially completed within two hundred and seventeen (217) calendar days from the Notice to Proceed ("NTP") date. The project scope of work is as stated in Paragraphs 1.01 (A) and (B) above. Final Completion of the project shall be within forty-five (45) days of the Substantial Completion Date.

"Substantial Completion" of the project shall be defined as the stage of construction when work is substantially completed and excludes all punch list items, record drawings, O&M manuals, lien waivers, maintenance training, warranties, consent of surety to final payment, and all other required closeout documentation.

"Final Completion" of the project shall be defined as work that is 100% complete including all punch list items, record drawings, O&M manuals, lien waivers, maintenance training, warranties, consent of surety to final payment, and all other required closeout documentation. Final Completion shall include Demobilization.

"Demobilization" shall consist of all activities by the Contractor and subcontractors necessary for 100% completion of the work and final contract closeout as listed above and all cleanup work and operations, including but not limited to, removal of personnel, equipment, contractor-owned stockpiles, supplies, and incidentals from the project site; return of any and all airport-issued

security identification badges; cleanup of all offices, buildings, batch plant, staging/lay-down areas, and other facilities; and restoration of all areas to preconstruction condition or better or to other condition as stipulated in the project plans and specifications; completion and delivery to the Owner of all contract closeout documentation and any other documentation request by Owner, including but not limited to, Operations and Maintenance Manuals, Warranties, Final Lien-waivers, Owner Controlled Insurance Program closeout paperwork, DBE paperwork, Final Project Record Documents and finalization of any and all punch list items. The Demobilization lump sum amount becomes fixed and will not change for the duration of contract.

- B. The actual NTP date will be negotiated and mutually agreed by both parties (Owner and Contractor) prior to issuance of the NTP. If mutual agreement cannot be reached between the parties, the Owner reserves the right to establish the actual Notice to Proceed date. The NTP letter will state the date on which the Contractor will begin construction and from which date contract time will be charged. Contractor shall be mobilized and on site ready for work on the date stated in the Notice to Proceed.
- C. "Mobilization" shall consist of all preparatory work and operations needed to begin construction activities on the date mutually agreed including but not limited to, final design, badging, submittals, movement of personnel, equipment, stockpiles, supplies and incidentals to the project site; the establishment of all offices, buildings, batch plant, staging/lay-down areas and other facilities necessary for work on the project; all other work and operations which must be performed or costs incurred prior to beginning work on the various items on the project site, and utility services for all offices, buildings, batch plant, staging/ lay-down areas, and other facilities. The Mobilization lump sum amount becomes fixed and will not change for the duration of contract.
- D. All days are calendar days.
- E. The work site will be available as described on the plans and applicable sections of these specifications. Work is permitted 24 hours per day, 7 days per week except that only non-noise producing activities shall be permitted between 11:00 PM and 6:00 AM, except with prior written approval of the Owner.
- F. The Contractor shall proceed with the work at such rate of progress to ensure full completion within the specified duration. It is expressly understood and agreed, by and between the Contractor and the Owner, that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.
- G. If the Contractor experiences weather related delays, he shall submit a report documenting the weather conditions and delays, if any, experienced during any calendar month.
- H. If the Contractor is prevented from working due to any other legitimate reason, he shall notify the Owner in writing as per the Lump Sum Construction Contract of the delay and request a corresponding increase in the number of contract days.
- I. The Owner shall be the sole judge as to whether or not a request for a contract time extension is legitimate.
- J. The Owner reserves the right to adjust limits of construction to accommodate the Owner's requirements for maintenance of Airport Operations and Public Traffic with minimum interruption during the construction of this project. Any required adjustment of limits of construction will be at no additional cost to the Owner.

3.02 LIQUIDATED DAMAGES

- A. 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, increased operational costs to airport users, and increased costs to the OWNER associated

with engineering services, inspections, testing, 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 critical Project Milestones.

- B. If the CONTRACTOR fails to deliver equipment or materials, or perform any services within the times and dates specified in this Contract to achieve the established Milestones, or any extensions granted in writing, the CONTRACTOR shall pay to the OWNER as Liquidated Damages, the sums specified in Table 1, below:

Table 1

<i>Milestone</i>	<i>Completion Date</i>	<i>Liquidated Damages</i>
Substantial Completion	217 days	\$1,000 per Day or any portion thereof
Final Completion and Demobilization Phase	45 days	\$500 per Day or any portion thereof

- D. Application of Liquidated Damages is not a Change to the Contract. The application of any Liquidated Damages to one Milestone shall not effect a change in the subsequent Contract Milestone dates or relieve CONTRACTOR of his responsibility to meet all construction schedules. If multiple Milestone dates are missed, Liquidated Damages for more than one Milestone will be imposed concurrently.
- E. 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.
- F. Liquidated Damages are in addition to any other damages or penalties which may be assessed and withheld under other provisions of this contract.

3.03 COMPLETION BONUS

NO completion bonus has been budgeted for this project.

END OF SECTION 01100

DIVISION 1 – SECTION 01125**RENOVATION****PART 1: GENERAL****1.01 RELATED DOCUMENTS**

General provisions of the Contract, and General and Supplementary Conditions and MSCAA “Design Guide – Construction Standards” apply to this section.

1.02 EXISTING CONDITIONS

The General Contractor is cautioned to visit the buildings and examine existing conditions as they relate to the new work. No extras will be considered for conditions visible or accessible at the time of bidding. The General Contractor has the responsibility to continually keep his own workmen, as well as his subcontractors and their workmen, advised as to the importance of existing conditions and their relationship to the finished project. The Architect is to be advised immediately of conflicts between existing conditions and work shown in the contract documents. The Contractor is to cease work in a conflicting area, if continued work jeopardizes the finished work, until a decision can be rendered by the Architect to resolve the conflict. Sample areas of repair and replacement surfaces to be reviewed by the Architect prior to proceeding.

1.03 OBSTRUCTIONS, CUTTING AND REPAIRING

Any obstruction encountered during the construction or installation of the Contract work shall be overcome by the Contractor, by removal or alteration of work in place, or making adjustments in the new work, without additional cost to the Owner. All cutting of work in place shall be performed in a neat workmanlike manner and held to a minimum. All cutting of work in place shall be patched and restored to condition equal to adjacent work. Structural members of existing work shall not be cut under any circumstances, except where expressly and particularly authorized by the Architect in writing. Cutting of existing work necessary for installation of mechanical and electrical work is specified in Divisions 15 and 16, but patching of finished work required because of such cutting shall be included in the general construction work.

1.04 CONNECTION TO EXISTING WORK

Existing work shall be cut, altered, removed, or temporarily removed and replaced as necessary for the performance of the Contract. New work in extension of existing work shall match that to which it connects. Work to remain in place, which is damaged or defaced by reason of work performed under the Contract, shall be restored equal to its condition at time of commencement of the work under the Contract. Where the removal of existing work exposed discolored or unfinished surfaces, or work out of alignment, such surfaces shall be refinished or the materials shall be replaced as necessary to make contiguous work uniform or harmonious. However, this paragraph shall not be construed to require the refinishing or reconstruction of dissimilar finishes previously exposed, nor of finished surfaces in good condition but in different planes or on different levels when brought together by the removal of intervening work, unless such refinishing or reconstruction is specifically shown or specified. All work required in the existing building shall be performed carefully so as not to damage the Owner's furniture, equipment, and similar items. Such items that cannot be temporarily removed from the areas of construction shall be covered with drop cloths, tarpaulins, or otherwise adequately protected from damage.

1.05 UNKNOWN UTILITY LINES

In performing the work under the Contract, it is possible that unknown utility lines may be encountered. Such lines may be lines which have been or will be abandoned, inactive lines which it may be desired to preserve for future use, or active lines which must be preserved and either relocated or replaced. Should such unknown lines be encountered, immediately notify the Architect, who will examine the lines to determine whether they

have been or will be abandoned, or shall be preserved. The Contractor shall assist the Architect by making tests or otherwise as the Architect deems necessary to determine how best to dispose of them. If the lines have been or may be abandoned, remove them to the extent necessary, without additional cost to the Owner. If it is found desirable or necessary to preserve the lines, they shall be capped off, relocated, or replaced, as directed by the Architect. In general, this shall be done by the trades having jurisdiction, but all trades shall fully cooperate in such work. Should changes in connection with unknown utility lines which are to remain active involve a change in the quantity of work called for by the drawings and specifications, the Contract amount shall be equitably adjusted by a Change Order in accordance with the provisions of the General Conditions for changes in the work.

1.06 FIRE PREVENTION

Develop plan for fire prevention and protection during the construction period, with particular emphasis on protecting the existing building and occupants therein during construction. Include provisions for exits where necessary due to construction processes on existing exits, access for the fire department to the site and areas of the building, early awarding of contracts for fire protection equipment, proper supervision of open flames and welding or cutting equipment, use of flame-proofed tarpaulins, hydrant protection availability, emergency protection in the forms of extinguishers, water pails, sand and small hose streams, and watchman service. Combustibles shall be kept outside of new construction. Establish an emergency procedure for fire alarm. Obtain Hot Work Permits from MSCAA Building Maintenance.

PART 2: MATERIALS

Provide all materials, tools, equipment, methods, and incidentals necessary and required to complete the work. Materials used to repair or replace exposed, existing surfaces must match those surfaces in texture and color. Where new work is installed adjacent to existing materials, utilize new materials of the quality specified therein to match the adjacent existing materials. If the original material type is not specified, provide related new material of the best quality. It should be understood that, where the original materials are still available and meet these specifications and unless specifically indicated otherwise on the drawings, the new materials shall be of the same manufacturer as the original. It should also be understood that it may be necessary to supply materials of the same type from more than one manufacturer. Where existing materials are indicated to be reused, use extreme care in their removal and storage. If, in the Architect's opinion the Contractor has used reasonable care in attempting to salvage material required by the drawings to be reused and in the Architect's opinion the material is not suitable for reuse he will recommend that a Change Order be issued to cover the cost of new material only.

PART 3: INSTALLATION

Wherever possible utilize craftsmen familiar with the process and techniques used in the original construction. This is especially true of the trades whose finish work is exposed and dependent upon the skill and technique of the craftsman, such as stucco or wood trim. All demolition including cutting of holes for new services must be accomplished with the minimal disruption of adjacent and surrounding materials which may remain in the project. Accurate starting and stopping locations must be laid out and discussed with the workmen actually doing the demolition. Any questions regarding the starting and stopping points, suitability of power equipment use, reuse of materials removed, or unusual conditions encountered during demolition must be brought to the attention of the Architect for this review prior to proceeding.

END OF SECTION 01125

DIVISION 1 – SECTION 01210

ALLOWANCES

PART 1 GENERAL

1.01 SUMMARY

- A. To provide adequate budget and bonding to cover items not precisely determined by the Owner prior to bidding, allow within the proposed Contract Sum the amounts described in this Section.
- B. Unless stated otherwise herein, all allowances are to be paid as Time and Materials Work per GP-150.
- C. Related Work:
 - 1. Documents affecting Work of this Section include, but are not necessarily limited to, Division 0, Division 1 and other Sections of these Specifications.
 - 2. Other provisions concerning Allowances may be stated in other Sections of these Specifications.

1.02 SPECIFIC ALLOWANCES – The following cash allowances are included within this Contract:

- A. None.

END OF SECTION 01210

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DIVISION 1 – SECTION 01230**ALTERNATES****PART 1 GENERAL****1.01 SUMMARY**

- A. This selection includes identification of each Alternate by number and describes the basic changes to be incorporated into the Work if a particular Alternate is made a part of the Work by specific provisions in the Agreement between the Owner and the Contractor.
- B. Related Work:
 - 1. Documents affecting Work of this Section include, but are not necessarily limited to, Division 0, Division 1 and other Sections of these Specifications.
 - 2. Materials and methods to be used in the Base Bid and in the Alternates also may be described on the Drawings and/or in pertinent other Sections of these Specifications.
 - 3. Method for stating the proposed Contract Sum is shown on the Bid Form.

1.02 SUBMITTALS

- A. All Alternates described in this Section are required to be reflected on the Bid Form as submitted by the Bidder.
- B. Do not submit Alternates other than as described in this Section.

1.03 SELECTION OF ALTERNATES

- A. Immediately after award of the Contract, or as soon thereafter as the Owner has made a decision on which, if any, of the Alternates will be selected, thoroughly and clearly advise necessary personnel and suppliers as to the nature of Alternates selected by the Owner.
- B. If the Owner elects to proceed on the basis of one or more of the described Alternates, make modifications to the Work required in providing the selected Alternate or Alternates to the approval of the Owner and at no additional cost to the Owner except as proposed in the Bid.

1.04 ADVANCE COORDINATION

- A. Immediately after award of the Contract, or as soon thereafter as the Owner has made a decision on which, if any, of the Alternates will be selected, thoroughly and clearly advise necessary personnel and suppliers as to the nature of Alternates selected by the Owner.

PART 2 ALTERNATES – The following alternates are included within this Contract:

- A. None

END OF SECTION 01230

DIVISION 1 – SECTION 01250**AMENDMENT PROCEDURE****PART 1 GENERAL****1.01 SUMMARY**

- A. Make such changes in the Work, in the Contract Price, in the Contract Time, or any combination thereof, as are described in written Amendments signed by the Owner and the Contractor and issued after execution of the Construction Contract, in accordance with the provisions of this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Division 0, Division 1, and other Sections of these Specifications.
 - 2. Any proposal for a change in the Work shall include DBE participation consistent with the required DBE percentage for this Contract. If the Contractor is unable to meet said DBE percentage, a written justification of the good faith efforts made shall be submitted along with the response to the Engineer's or Owner's proposal request.
 - 3. Engineer or Owner supplemental instructions:
 - a. From time to time during progress of the Work the Engineer or Owner may issue supplemental instructions, which interpret the Contract Documents or order minor changes in the Work without change in Contract Sum or Contract Time.
 - b. Should the Contractor consider that a change in Contract Sum or Contract Time is required, he shall submit an itemized proposal to the Engineer or Owner immediately and before proceeding with the Work. If the proposal is found to be satisfactory and in proper order, the supplemental instructions in that event will be superseded by an Amendment.
 - 4. Proposal requests:
 - a. From time to time during progress of the Work the Engineer or Owner may issue a Request for Proposal (RFP) proposal request for an itemized quotation for changes in the Contract Price and/or Contract Time incidental to proposed modifications to the Contract Documents.
 - b. This will not be an Amendment and will not be a direction to proceed with the changes described therein.

1.02 QUALITY ASSURANCE

- A. Include within the Contractor's quality assurance program such measures as are needed to assure familiarity of the Contractor's staff and employees with these procedures for processing Amendment data.

1.03 PROCESSING PROPOSAL REQUESTS

- A. Make timely written reply to the Engineer or Owner in response to each proposal request. Proposal requests will be numbered in sequence and dated.
1. State proposed change in the Contract Sum, if any.
 2. State proposed change in the Contract Time of Completion, if any.
 3. Clearly describe other changes in the Work, if any, required by the proposed change or desirable therewith.
 4. State amount of DBE participation applicable to the proposed changes.
 5. Include full backup data such as subcontractor's letter of proposal or similar information.
 6. Submit this response in single copy.
- B. When cost or credit for the change has been agreed upon by the Owner and the Contractor, or the Owner has directed that cost or credit be determined in accordance with provisions of Division 0 and Division 1 Specifications, the Engineer or Owner will prepare an Amendment for execution by the Owner and Contractor.

1.04 PROCESSING AMENDMENTS

- A. Amendments will be numbered in sequence and dated.
1. The Amendment will describe the change or changes, will refer to the proposal requests or supplemental instructions involved, and will be signed by the Contractor and Owner, in sequence.
 2. The Engineer or Owner will issue two copies of each Amendment to the Contractor.
 - a. The Contractor shall promptly sign all copies and return all copies to the Engineer or Owner for further processing by the Owner.
 - b. The Engineer or Owner will forward all copies to the Owner with a request for complete processing.
 - c. The Owner will sign and return a copy to the Contractor for distribution.

END OF SECTION 01250

DIVISION 1 – SECTION 01310**PRECONSTRUCTION CONFERENCE & PROGRESS MEETINGS****PART 1 PRECONSTRUCTION CONFERENCE****1.01 SUMMARY**

- A. To help clarify construction contract administration procedures, the Engineer or Owner will schedule a Preconstruction Conference prior to start of the Work, as described in this Section.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Division 0 and Division 1 Specification Sections.

1.02 AGENDA AND MEETING SUMMARIES

- A. To the maximum extent practicable, advise the Engineer or Owner at least 24 hours in advance of the Conference as to items to be added to the agenda.
- B. The Engineer or Owner will compile summaries of the Conference, and will furnish copies of the summaries to the Contractor. The Contractor may make and distribute such other copies as he wishes.

1.03 QUALITY ASSURANCE

- A. For those persons designated by the Contractor, his subcontractors, and suppliers to attend the Pre-Construction Conference, provide required authority to commit the entities they represent to schedules and solutions agreed upon in the Conference.

1.04 PRECONSTRUCTION CONFERENCE

- A. The Conference will be held at a time and date established by the Engineer or Owner. If requested by the Engineer or Owner, additional conferences will be held.
- B. Attendance:
 - 1. Insure attendance by authorized representatives of the Contractor and major Subcontractors.
 - 2. The Engineer or Owner will advise other interested parties, including the Owner, and request their attendance.
- C. Minimum agenda:
 - 1. Organizational arrangement of Contractor's forces and personnel and those of subcontractors, material suppliers, and the Engineer or Owner;
 - 2. Channels and procedures for communications;
 - 3. Construction schedule, including sequence of critical work;
 - 4. Contract Documents, including distribution of required copies of Drawings and revisions;
 - 5. Processing of Shop Drawings and other data submitted to the Engineer or Owner for

- review;
6. Processing of field decisions and Change Orders;
 7. Rules and regulations governing performance of the Work;
 8. Procedures for safety and first aid, security, quality control, housekeeping, and related matters; and
 9. Reports required and schedule for submittal.
 10. Items requiring long lead time and special requirements.

PART 2 PROGRESS MEETINGS

2.01 DESCRIPTION

- A. Work included: To enable orderly review during progress of the Work, and to provide for systematic discussion of problems, the Engineer or Owner will conduct project meetings throughout the construction period.
- B. Related work:
 1. Documents affecting work of this Section include, but are not necessarily limited to, General Provisions, and other Sections of these Specifications.
 2. The Contractor's relations with his subcontractors and materials suppliers, and discussions relative thereto, are the Contractor's responsibility and normally are not part of project meetings content.

2.02 SUBMITTALS

- A. Agenda items: To the maximum extent practicable, advise the Engineer or Owner at least 24 hours in advance of project meetings regarding items to be added to the agenda.
- B. Summaries:
 1. The Engineer or Owner will compile summaries of each project meeting, and will furnish copies to the Contractor and the Owner.
 2. Recipients of copies may make and distribute such other copies as they wish.

2.03 QUALITY ASSURANCE

- A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the project meetings.

PART 3 EXECUTION

3.01 MEETING SCHEDULE

- A. Project meetings will be held at times as determined by the Engineer or Owner.

- B. Coordinate as necessary to establish a mutually acceptable schedule for meetings.

3.02 MEETING LOCATION

- A. The Engineer or Owner will establish the meeting location.

3.03 PROJECT MEETINGS

- A. Attendance:

1. To the maximum extent practicable, assign the same person or persons to represent the Contractor at project meetings throughout progress of the Work.
2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.

- B. Minimum agenda:

1. Review, revise as necessary, and approve summaries of previous meetings.
2. Review progress of the Work since last meeting, including status of outstanding submittals.
3. Identify problems which may impede planned progress.
4. Develop corrective measures and procedures to reestablish planned schedule.
5. Discuss other current business.

- C. Revisions to summaries:

1. Unless published summaries are challenged in writing prior to the next regularly scheduled progress meeting, they will be accepted as properly stating the activities and decisions of the meeting.
2. Persons challenging published summaries shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of summaries.
3. Challenge to summaries shall be settled as priority portion of "old business" at the next regularly scheduled meeting.

END OF SECTION 01310

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DIVISION 1- SECTION 01320**SCHEDULES AND REPORTS****PART 1 GENERAL****1.01 SUMMARY**

- A. The work under this Contract shall be planned, scheduled and reported using computerized precedence diagram format of the Critical Path Method in calendar days, unless otherwise specifically provided in the Contract Documents. The Detailed Construction Schedule shall be developed by using the latest revision of Microsoft Project, or approved equal computer software.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, other Sections of these Specifications.
 - 2. Other provisions concerning Schedules and Reports are stated to Specification Sections:
 - 01100 – Summary of Work, Sequence of Construction & Liquidated Damages
 - General Provision Section 60 - Control of Materials
 - General Provision Section 90 - Measurement and Payment

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION**3.01 GENERAL REQUIREMENTS**

- A. The Detailed Construction Schedule shall be developed by using the latest revision of Microsoft Project, or approved equal computer software that is compatible with Owner's scheduling software.
- B. The primary objectives of the requirements of this section are:
 - 1. to insure adequate planning and execution of the Work by Contractor;
 - 2. to assist Owner and Engineer in evaluating the progress of the Work;
 - 3. to provide a mechanism or tool for use by the Owner, Engineer and Contractor in determining and monitoring any actions of the Contractor which may be required in order to comply with the requirements of the Contract relating to the timely completion of the various portions of the Work
- C. The Detailed Construction Schedule, defined in Paragraph 3.04, shall represent the Contractor's commitment and intended plan for completion of the Work in compliance with the Contract. The Contractor will not:
 - 1. Misrepresent to the Owner its planning, scheduling, and coordination of the work;
 - 2. Utilize schedules different from those provided to the Owner and Engineer for the direction, execution and coordination of the work;
 - 3. Utilize schedules which are not feasible or realistic; or

4. Prepare schedules, updates, revisions or reports which do not accurately reflect the Contractor's actual intent or the Contractor's reasonable and actual expectations as to: the sequences of activities, labor availability, productivity, or efficiency; expected or reasonably foreseeable inclement weather conditions; the percentage complete of any activity or path of activities; completion of any item of work or activity; projected dates of completion; delays, slippage, or problems encountered or expected and Subcontractor requests for time extensions,
- D. Once approved by the Engineer or Owner, the Detailed Construction Schedule will become the Schedule of Record for coordinating the work, scheduling the work, monitoring the work, issuing progress payments, evaluating time extension requests, and all other objectives listed in Paragraph 3.01.B. The Contractor is required to employ whatever means he deems necessary to implement the Detailed Construction Schedule and to comply with the requirements of this Section. Updates shall be provided to the Engineer or Owner at each construction progress meeting or as requested by the Engineer or Owner. Updates shall be both electronic media and hard copy.
 - E. Contractor is responsible for determining the sequence of activities, the time estimates of the detailed construction activities and the means, methods, techniques and procedures to be employed. Each construction schedule shall represent the Contractor's best judgment of how he will prosecute the Work in compliance with the Contract.
 - F. Contractor shall consult with his Subcontractors and Suppliers (if any) relating to the preparation of each construction schedule. Subcontractors shall receive copies of each construction schedule and shall be continually advised of any updates or revisions to each construction schedule as the Work progresses.
 - G. When there are separate contractors working concurrently on Airport whose work must interface or be coordinated with the Work of Contractor, Contractor shall coordinate his activities with the activities of the separate contractors and shall, prior to the submission of any construction schedule to the Engineer or Owner, obtain written approval of his construction schedule by the separate contractors.
 - H. To carry out the intent of this Section, the Contractor agrees that the reasonable exercise of any rights under this Section by the Engineer or Owner shall not be grounds for any claim by Contractor or any of his Suppliers, Subcontractors or Sub-subcontractors of alleged interference, lack of cooperation, delay, disruption, negligence or hindrance by Owner or Engineer, and Contractor covenants not to sue therefor.
 - I. It is understood and agreed that the Detailed Construction Schedule, defined in Paragraph 3.04, is to represent Contractor's best plan and commitment for the Work; however, Contractor acknowledges that the Detailed Construction Schedule may have to be revised from time-to-time as progress proceeds. Contractor further acknowledges and agrees that the Owner and Engineer do not guarantee that:
 1. Any changes, modifications or adjustments to any schedule by Contractor can only be made by the written approval of the Engineer or Owner.
 - J. It is understood and agreed that should the Engineer or Owner provide the Contractor, at Contractor's request, with any advice relating to the scheduling or coordination of the Work or any other matter that:
 1. Owner and Engineer shall not be liable to Contractor for any errors, omissions, negligence or deficiencies which may in any way occur because of same;
 2. Such advice is provided solely as aids in the development by Contractor of a

representation of Contractor's actual construction plan and schedule in accordance with the requirements of the Contract Documents, and Owner and Engineer shall not be liable to Contractor should Contractor rely on such advice or counsel to his detriment;

3. Such advice shall not relieve Contractor of any responsibility under Paragraph 3.01.E hereof for all construction means, methods techniques, sequences and procedures and for planning, scheduling and coordinating all portions of the Work; and
 4. Any advice provided by the Engineer or Owner or the lack or alleged untimeliness thereof will not in any way take the place of or relieve the Contractor of full responsibility for compliance with all requirements of the Contract, including, but not limited to the obligations to complete the Work within the Contract.
- K. Approval or acceptance by the Owner or Engineer of any Contractor's construction schedule, or any revisions or updates thereto, shall not relieve the Contractor of the responsibility for accomplishing the Work by the Project Substantial Completion date.
- L. Contractor shall be solely responsible for expediting the delivery of all materials and equipment to be furnished by him so that the progress of construction shall be maintained according to the currently approved construction schedule for the Work. Contractor shall notify the Owner or Engineer in writing, and in a timely and reasonable manner, whenever Contractor determines or anticipates that the delivery date of any material or equipment to be furnished by Contractor will be later than the delivery date indicated by the currently approved construction schedule, or the current update thereof as herein provided.

3.02 NOT USED

3.03 DETAILED CONSTRUCTION SCHEDULE DRAFT

- A. No later than two (2) weeks after the Notice to Proceed, the Contractor shall complete a draft of the Detailed Construction Schedule in accordance with the requirements of this Paragraph 3.03.

3.04 DETAILED CONSTRUCTION SCHEDULE

- A. Prior to any monthly Application for Payment, the Contractor shall complete the Detailed Construction Schedule to the satisfaction of the Owner or Engineer.
- B. The Detailed Construction Schedule shall represent the Contractor's commitment and intended plan for completion of the Work in compliance with the Contract.
- C. The Owner/Engineer reserves the right to require the Contractor to furnish such manpower, materials facilities and equipment and shall work such hours, including additional shifts and overtime operations as may be necessary, to insure completion of the Work or specified portions thereof within the specific dates as set forth in the Contract Documents. If it becomes apparent to the Owner or Engineer that the work, or any required portion thereof, will not be completed by any such dates, the Contractor shall undertake the following actions, at no additional cost to the Owner, and comply with the requirements as set forth in Section 01320, 3.07 and 3.08, in order to ensure that it complies with all completion requirements:
1. Increase the quantity of manpower, materials, trades, crafts, and equipment and facilities on the site;
 2. Increase the number of working hours per shift, shifts per working day, or any combination of the foregoing; and
 3. Reschedule activities to achieve maximum activity accomplishment.

3.05 DETAILED CONSTRUCTION SCHEDULE CONTENT

- A. The Detailed Construction Schedule shall consist of a time-scaled graphic representation of all activities, which are part of the Contractor's construction plan and an accompanying listing of each activity's dependencies and interrelationships.
- B. The Contractor shall anticipate and account for, as a minimum, the potential loss of the number of **calendar** days listed below for each calendar month due to weather and shall schedule the work accordingly.

January	6	July	6
February	6	August	6
March	8	September	4
April	6	October	5
May	8	November	5
June	5	December	7

The preceding days were derived from historical data provided by the National Climatic Data Center regarding rainfall at Memphis International Airport. They represent a number less than the actual number of days of measurable rainfall that can be expected to occur during a twenty-four (24) hour period for the months indicated. **The Contractor shall make his own determination as to the likely impact of weather on his operation and shall include as part of the Detailed Construction Schedule submission an accounting of how the impact of anticipated weather was determined and accounted for in the schedule.** These values listed above are the minimum number of weather related days the Contractor shall consider in developing his Detailed Construction Schedule. It is further understood that said calendar day period shall be derived through assuming that work will take place on a calendar day basis.

The Owner or Engineer will continually monitor the effects of weather and when found justified, grant time extensions, if required, at the end of the Contract. In the event less weather days are actually encountered than provided for in this section, those days will accrue to subsequent months of the phase or contract and be balanced against actual weather. In accordance with the Contract Documents weather days occurring during the extension beyond the original completion date will be compensated day for day, if justified. No weather days will be granted beyond the final Contract completion date as computed herein.

- C. All activity durations shall be given in calendar days.
- D. Contractor shall plan his operations and schedule the work to ensure that the critical path runs through on-site construction activities and that off-site procurement activities do not control the critical path of the Detailed Construction Schedule, unless approved in writing by the Owner or Engineer.

3.06 UPDATING OF CONSTRUCTION SCHEDULE/PROGRESS REPORTS

- A. The Detailed Construction Schedule will be reviewed and updated as needed during each project progress meeting.

3.07 RECOVERY SCHEDULE

- A. Should the updated Detailed Construction Schedule, at any time during Contractor's performance, show, in the sole opinion of the Owner or Engineer, that the Contractor is seven (7) or more days behind schedule for any location or category of work, or should Contractor be required to undertake actions under Paragraph 3.04.D hereof, the Contractor shall immediately prepare a

Recovery Schedule explaining and displaying how Contractor intends to reschedule his Work in order to regain compliance with the Approved Detailed Construction Schedule during the immediate subsequent pay period.

3.08 SCHEDULE REVISIONS

- A. Should Contractor desire to or be otherwise required under the Contract to make modifications or changes in his method of operation, his sequence of Work or the durations of the activities in his Construction Schedule, he shall do so in accordance with Paragraph 3.04 of this specification. The approved Detailed Construction Schedule may only be revised by the written approval of the Owner or Engineer as provided herein.

END OF SECTION 01320

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DIVISION 1 – SECTION 01325**DELAYS AND EXTENSIONS OF TIME****1.01 DESCRIPTION**

- A. Work included:
 - 1. Delays and extensions of time.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to the General Provisions, and other Sections of these Specifications.

1.02 OBLIGATION OF OWNER AND PROGRAM MANAGER

- A. Neither the Owner nor the Program Manager shall be obligated or liable to the Contractor for any damages, cost or expenses of any type which the Contractor, its subcontractors, sub-subcontractors, or any other person may incur as a result of any disruption or delay from any cause, regardless of the actual source of delay, whether avoidable or unavoidable, it being understood and agreed that the Contractor's sole and exclusive remedy in such event shall be an extension of the Contract Time, but in accordance with provisions of the Contract Documents.
- B. Except for weather delays, any claim for extension of time shall be made in writing to the Program Manager not more than ten (10) days after commencement of such delay, otherwise, such claim will be waived. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the Work.
- C. The time during which the Contractor is delayed in performance of the work caused by the acts or omissions of the Owner, Program Manager or their employees or agents, or by acts of God, fires, floods, epidemics, quarantine restrictions, riots, civil commotions or freight embargoes, or other conditions beyond the Contractor's control which the Contractor could not have reasonably foreseen and provided against shall be added to the Contract Time; however, the Contractor must submit his claim for such delays in accordance with the requirements of this Section and any other applicable provisions of these Contract Documents in order to be considered for an extension of time.
- D. The Contract Time shall be adjusted only for changes in the work pursuant to GP-40, suspensions of the work, excusable delays or emergencies. Whenever the Contractor requests an extension of the Contract Time, the Contractor shall furnish such justification and supporting evidence as required by this section and such other and additional information as the Owner may deem necessary to determine whether the Contractor is entitled to an extension of the Contract Time. All such requests shall conform to all of the requirements of the Contract Documents, shall include evidence that the reasons for the requested Contract Time extension were beyond the control of the Contractor, and the Contractor shall bear the burden of substantiating and proving the necessity of an extension to the Contract Time. The Owner, with the assistance of the Program Manager, shall review all requests for Contract Time extensions and shall advise the Contractor of its decision and finding of fact in writing. If the Owner determines that the Contractor is entitled to an extension of the Contract Time, the length of the extension shall be based upon the currently approved detailed construction schedule and on all other relevant data, which data shall be incorporated into and from the basis for revision to the construction schedule.

The Contractor acknowledges and agrees that the actual delays due to said changes, suspension of the work, or excusable delays in activities which, according to the detailed construction schedule, do not affect the Contract Time, shall not affect the Contract Time, and therefore, cannot form the basis for an extension in the Contract Time or a change in the construction schedule.

- E. The Contractor shall be entitled to an extension of the Contract Time but no increase in the Contract sum, for delays arising from unforeseeable causes beyond the control and without the fault of negligence of the Contractor or its Subcontractors as follows:
1. Acts of God, tornadoes, fires, blizzards, earthquakes, or floods that severely damages completed work or stored materials.
 2. Acts of the public enemy; acts of the state, federal or local governments in their sovereign capacities; and acts of a separate contractor in the performance of a separate contract with the Owner relating to this or another project.
- F. The Contractor shall not be entitled to any extension of Contract Time resulting from any condition or cause unless the Contractor strictly complies with the requirements of this Section and the Contractor must submit to the Program Manager within ten (10) days of the first instance of the delay a written request for an extension in the Contract Time which shall include the following information: (a) the nature of the delay; (b) the date of anticipated date of commencement of the delay; (c) activities on the schedule affected by the delay, and/or new activities created by the delay and their relationship with existing activities; (d) identification of persons or organizations or events responsible for the delay; and (e) recommended action to avoid or minimize the delay.
- G. No claim for delay shall be allowed and the Contractor waives any such claim if the Contractor fails to furnish the written request, required by this or other sections, within the period of time specified therein.

END OF SECTION 01325

DIVISION 1 – SECTION 01330**SUBMITTALS****PART 1 GENERAL****1.01 SUMMARY**

- A. This section describes the process for handling Contractor submittals.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Division 0, Division 1, and other Sections of these Specifications

1.02 SUBMITTALS

- A. Except as otherwise specified below, as soon as practicable after contract award and without causing delay in the work, submit at least 7 bound copies 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. Alternatively, all Submittals may be submitted electronically in lieu of hard copies, if possible. 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.
 - 1. Submittals shall include all test results and/or certificate 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.

1.03 QUALITY ASSURANCE

- A. Before submission to the Engineer or Owner, 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 or Owner will return for resubmission, all submittals without the above specified approval and certification, and all submittals which in the Engineer's or Owner's opinion contain numerous discrepancies and/or have not been checked by the Contractor or Subcontractor.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION**3.01 SUBMITTAL REVIEW**

- A. After the Owner or Engineer has reviewed the submittals, except as otherwise specified below, submittals will be dated, and three sets will be returned to the Contractor. If submittals are rejected, four sets will be returned to the Contractor, with indications of the required corrections and changes made on one of the sets. Make such corrections and changes as indicated. Resubmit

submittals as specified above, as often as required by the Engineer or Owner to complete the review. No correction or change indicated on submittals shall be considered as an order for extra work.

- B. Submittals reviewed by the Owner or Engineer will be a general review only, and acceptance will not relieve Contractor or Subcontractor of responsibility for accuracy of submittals, proper fitting, coordination, construction or work, and furnishing materials and work required by Contract but not indicated on submittals. Review of submittals shall not be construed as accepting departures from Contract requirements.
- 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 SECTION 01330

DIVISION 1 – SECTION 01351
STORAGE AND PROTECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Protect products scheduled for use in the Work by all means including, but not necessarily limited to, those described in this Section.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Division 0, and Division 1 of these Specifications.
 - 2. Additional procedures may also be prescribed in other Sections of these Specifications.

1.02 QUALITY ASSURANCE

- A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

1.03 MANUFACTURERS' RECOMMENDATIONS

- A. Except as otherwise approved by the Owner or Engineer, determine and comply with manufacturers' recommendations on product handling, storage, and protection.

1.04 PACKAGING

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace same with material meeting the specified requirements, at no additional cost to the Owner.
- B. The Owner or Engineer may reject as non-complying such material and products as do not bear identification satisfactory to the Owner or Engineer such as manufacturer, grade, quality, and other pertinent information.

1.05 PROTECTION

- A. Protect finished surfaces, materials, trenches, earthwork, etc. from weather, construction operations, etc.
- B. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

1.06 REPAIRS AND REPLACEMENTS

- A. In event of damage, promptly make replacements and repairs to the approval of the Owner or Engineer and at no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the Owner or Engineer to justify an extension in the Substantial Completion Date.

END OF SECTION 01351

DIVISION 1 - SECTION 01600**PRODUCT REQUIREMENTS****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings, Contract, Division 0 and Division 1 Specification Sections apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing Contractor's selection of products for use in Project.
- B. Related Sections: Following Sections contain requirements that relate to this Section:
1. Division 1 Section "Reference Standards and Definitions" specifies the applicability of industry standards to products specified.
 2. Division 1 Section 01320 specifies requirements for submittal of the Contractor's Construction Schedule and the Submittal Schedule.
 3. Division 1 Section "Product Substitution Procedures" specifies administrative procedures for handling requests for substitutions made after award of the Contract.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change meaning of other terms used in Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms such are self-explanatory and have well recognized meanings in construction industry.
1. **"Products"** are items purchased for incorporation in Work, whether purchased for Project or taken from previously purchased stock. Term "product" includes terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in manufacturer's published product literature, that is current as of date of Contract Documents.
 - b. "Foreign Products," as distinguished from "domestic products," are items substantially manufactured (50% or more of value) outside of United States and its possessions; or produced or supplied by entities substantially owned (more than 50%) by persons who are not citizens of nor living within United States and its possessions.
 2. **"Materials"** are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form part of Work.
 3. **"Equipment"** is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.4 SUBMITTALS

- A. Product List: Prepare list showing products specified in tabular form acceptable to Program Manager. Include generic names of products required. Include manufacturer's name and proprietary product names for each item listed.
1. Coordinate product list with Contractor's Construction Schedule and Schedule of Submittals.
 2. Form: Prepare product list with information on each item tabulated under following column headings:
 - a. Related Specification Section number.
 - b. Generic name used in Contract Documents.
 - c. Proprietary name, model number and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date, or time span of delivery period.
 3. Initial Submittal: Within 30 days after date of commencement of Work, submit 3 copies of an initial product list. Provide written explanation for omissions of data and for known variations from Contract requirements.
 - a. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 4. Completed List: Within 60 days after date of commencement of Work, submit 3 copies of completed product list. Provide written explanation for omissions of data and for known variations from Contract requirements.
 5. Engineer's Action: Engineer will review and the Program Manager will respond in writing to Contractor within 2 wks of receipt of completed product list. No response within this period constitutes no objection to listed manufacturers or products but does not constitute a waiver of the requirement that products comply with Contract Documents. Engineer's review will include a list of unacceptable product selections, containing a brief explanation of reasons for this action.
- B. Source Limitations: To fullest extent possible, provide products of same kind, from single source.
1. When specified products are available only from sources that do not or cannot produce quantity adequate to complete project requirements in timely manner, consult with Program Manager for determination by the Engineer of most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability, or compatibility. When determination has been made, select products from sources that produce products that possess these qualities, to fullest extent possible.
- C. Compatibility of Options: When Contractor is given option of selecting between 2 or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
1. Each Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other separate Contractors.
 2. If dispute arises between Contractors over concurrently selectable, but incompatible products, Engineer will determine which products shall be retained and which are incompatible and must be replaced.
- D. Foreign Product Limitations: Except under 1 or more of following conditions, provide domestic products, not foreign products, for inclusion in the Work:

1. No available domestic product complies with Contract Documents.
 2. Domestic products that comply with Contract Document are only available at prices or terms that are substantially higher than foreign products that also comply with Contract Documents.
- E. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on exterior.
- F. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.
- G. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. Nameplate shall contain following information and other essential operating data:
1. Name of product and manufacturer.
 2. Model and serial number.
 3. Capacity.
 4. Speed.
 5. Ratings.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle products according to manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
1. Schedule delivery to minimize long-term storage at site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
 3. Deliver products to site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
 4. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.
 5. Store products at site in manner that will facilitate inspection and measurement of quantity or counting of units.
 6. Store heavy materials away from Project structure in manner that will not endanger supporting construction.
Store products subject to damage by elements above ground, under cover in weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with Contract Documents, that are undamaged and, unless otherwise indicated, new at time of installation.
1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for complete installation and for intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

- B. Product Selection Procedures: Product selection is governed by Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include following:
1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide product indicated. No substitutions will be permitted.
 2. Semiproprietary Specification Requirements: Where 2 or more products or manufacturers are named, provide 1 of products indicated. No substitutions will be permitted.
 - a. Where products or manufacturers are specified by name, accompanied by term "or equal," or "or approved equal" comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 3. Compliance with Standards, Codes and Regulations: Where Specifications only require compliance with an imposed code, standard or regulation, select product that complies with standards, codes or regulations specified.
 4. Visual Matching: Where Specifications require matching an established Sample, Engineer's decision will be final on whether proposed product matches satisfactorily.
 - a. Where no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of Contract Documents concerning "substitutions" for selection of matching product in another product category.
 5. Visual Selection: Where specified product requirements include phrase "...as selected from manufacturer's standard colors, patterns, textures..." or similar phrase, select product and manufacturer that complies with other specified requirements. Engineer will select color, pattern and texture from product line selected.
 6. Allowances: Refer to individual Specification Sections and "Allowance" provisions in Division 1 for allowances that control product selection, and for procedures required for processing such selections.

2.2 ASBESTOS-FREE REQUIREMENTS

- A. The Contractor shall not use any asbestos containing material (ACM) at any time during the Project. The Contractor shall verify that all materials used on the Project are asbestos-free materials.
- B. During the course of the Project, the Contractor shall routinely check products utilized on-site to ensure only asbestos-free products are utilized.
- C. If the Owner suspects the presence of asbestos, the Owner will sample the suspect material to verify that no ACM was utilized. This testing shall be performed at the expense of the Owner. If ACM is subsequently found during the sampling, the Contractor shall remove and replace the product or material at his/her sole expense. No adjustment of the Contract Schedule will be provided to account for delays associated with removal and/or replacement of ACM. The Contractor shall reimburse Owner for any and all costs associated with the original testing and/or any re-testing that may be necessary.
- D. Upon completion, a notarized certification statement shall be provided by the Contractor to the Owner certifying that all materials associated with this Project are asbestos free. See Specification 01771 Closeout Documents for certification document. If the Contractor does not submit the required asbestos-free certification, the Authority shall have a complete building survey performed by a qualified testing firm within the Project's location. The cost of the survey and any subsequent removal/replacement of any ACM shall be deducted from the Contractor's final payment at the sole discretion of the Owner.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS:

- A. Comply with manufacturer's instructions and recommendations for installation of products in applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 - 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration until time of Substantial Completion.

END OF SECTION 01600

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DIVISION 1 - SECTION 01630
PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, Contract, Division 0 and Division 1 Specification Sections apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of Contract.
- B. Contractor's Construction Schedule and Schedule of Submittals are included under Section 01320.
- C. Standards: Refer to Section "Reference Standards and Definitions" for applicability of industry standards to products specified.
- D. Procedural requirements governing Contractor's selection of products and product options are included under Section "Product Requirements."
- E. Program Manager's policy is to reject requests for substitution unless paragraph "Substitutions" under Article "Definitions" applies.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify meaning of other terms used in Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by Contractor after award of Contract are considered requests for "substitutions." Following are not considered substitutions:
1. Revisions to Contract Documents requested by Owner or Program Manager.
 2. Specified options of products and construction methods included in Contract Documents.
 3. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.4 SUBMITTALS

- A. Substitution Request Submittal: Requests for substitution will be considered if received within 30 days after commencement of Work. Requests received more than 30 days after commencement of Work may be considered or rejected at discretion of Program Manager.
1. Submit 3 copies of each request for substitution for consideration. Submit requests on forms included at end of this Section.

2. Identify product, or fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with requirements for substitutions, and the following information, as appropriate:
 - a. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
 - b. Samples, where applicable or requested.
 - c. Detailed comparison of significant qualities of proposed substitution with those of Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
 - d. Coordination information, including list of changes or modifications needed to other parts of Work and to construction performed by Owner and separate Contractors, that will become necessary to accommodate proposed substitution.
 - e. Statement indicating substitution's effect on Contractor's Construction Schedule compared to schedule without approval of substitution. Indicate effect of proposed substitution on the overall Substantial Completion of the project.
 - f. Cost information, including proposal of net change, if any in Contract Sum.
 - g. Certification by Contractor that substitution proposed is equal-to or better in every significant respect to that required by Contract Documents, and that it will perform adequately in application indicated. Include Contractor's waiver of rights to additional payment or additional Contract time, that may subsequently become necessary because of failure of substitution to perform adequately.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: Contractor's substitution request will be received and considered by Program Manager when one or more of following conditions are satisfied, as determined by Program Manager; otherwise requests will be returned without action except to record noncompliance with these requirements.
 1. Extensive revisions to Contract Documents are not required.
 2. Proposed changes are in keeping with general intent of Contract Documents.
 3. Request is timely, fully documented and properly submitted.
 4. Request is directly related to an "or equal" clause or similar language in Contract Documents.
 5. Specified product or method of construction cannot be provided within Contract Time. Request will not be considered if product or method cannot be provided as result of failure to pursue Work promptly or coordinate activities properly.
 6. Specified product or method of construction cannot receive necessary approval by governing authority, and requested substitution can be approved.
 7. Substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities Owner may be required to bear. Additional responsibilities for Owner may include additional compensation to Program Manager and Engineer for redesign and evaluation services, increased cost of other construction by Owner or separate Contractors, and similar considerations.
 8. Specified product or method of construction cannot be provided in manner that is compatible with other materials, and where Contractor certifies that substitution will overcome incompatibility.
 9. Specified product or method of construction cannot be coordinated with other materials, and where Contractor certifies that proposed substitution can be coordinated.
 10. Specified product or method of construction cannot provide warranty required by Contract Documents and where Contractor certifies that proposed substitution provide required warranty.

- B. Contractor's submittal to the Program Manager and Engineer's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
- C. See next page for "Request for Substitution" form.

REQUEST FOR SUBSTITUTION

To:

Attention:

From:

_____ Name of Company

_____ Address

_____ City, State, Zip Code

_____ Phone

Fully answer all information requested below. Failure to answer any item may cause rejection of request for substitution. If requested by Program Manager, submit information about manufacturer and vendor history, financial stability, distribution and support systems. Use one form for each product requested. Only first product listed will be considered on forms with more than one product listed.

Specification Section Number: _____ Drawing Number: _____

Para Number: _____ Detail Number: _____

Specified Product: _____

Proposed Substitution: _____

Answer the following questions. Attach an explanation sheet on your company's letterhead when required.

Does the proposed substitution affect dimensions indicated on Drawings?

No _____ Yes _____ (If yes, explain below).

Does the proposed substitution require changes in Drawings and/or design or installation changes?

No _____ Yes _____

If yes, is the cost of these changes included in the proposed amount? No ____ Yes ____

Does the proposed substitution affect other trades? No _____ Yes _____

(If yes, explain who and how)

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DIVISION 1 – SECTION 01700**FIELD ENGINEERING****PART 1 GENERAL****1.01 SUMMARY**

- A. Provide such field engineering services as are required for proper completion of the Work including, but not necessarily limited to:
1. Establishing and maintaining lines and levels;
 2. Structural design of shores, forms, and similar items provided by the Contractor as part of his means and methods of construction.

All field engineering is incidental to the Item for which it applies. No direct pay will be made for field engineering.

- B. Related work:
1. Documents affecting work of this Section include, but are not necessarily limited to, Division 0, Division 1 and other Sections of these Specifications.
 2. Additional requirements for field engineering may be described in other Sections of these Specifications.

1.02 SUBMITTALS

- A. Upon request of the Owner or Engineer, submit:
1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.
 2. Documentation verifying accuracy of field engineering work.
 3. Certification, signed by the Contractor's retained field engineer, certifying that elevations and locations of improvements are in conformance or nonconformance with requirements of the Contract Documents.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.04 PROCEDURES

- A. In addition to other procedures directed by the Contractor for proper performance of the Contractor's responsibilities:
1. Locate and protect control points before starting work on the site.
 2. Preserve permanent reference points during progress of the Work.
 3. Prior to commencing any work requiring location or grades, the Contractor shall establish

temporary bench marks (TBMs) at an interval not to exceed 1000 feet. TBMs are to be located in areas not anticipated to be disturbed by construction. Provide the Owner or Engineer copies of field notes, including peg test of level, and a listing of the adjusted coordinates and elevations of all TBMs.

4. Do not change or relocate reference points or items of the Work without specific approval from the Owner or Engineer.
5. Promptly advise the Owner or Engineer when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.
 - a. Upon direction of the Owner or Engineer, require the field engineer to replace reference stakes or markers.
 - b. Locate such replacements according to the original survey control.

END OF SECTION 01700

DIVISION 1 – SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in paragraph 3.01 below and, upon completion of the Work, transfer the recorded changes to a set of Record Documents, as described in paragraph 3.02 below. This shall include Record Drawings.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Provisions and the Technical Sections of these Specifications.
 - 2. Other requirements affecting Project Record Documents may appear in pertinent other Sections of these Specifications.

1.02 SUBMITTALS

- A. The Program Manager’s review of the current status of Project Record Documents is a prerequisite to the Program Manager’s approval of requests for progress payments and request for final payment under the Contract.
- B. Prior to submitting each Application for Payment, secure the Program Manager’s review of the current status of the Project Record Documents.
- C. The final project Record Documents must be submitted to the Program Manager and secure approval before final payment for demobilization can occur.

1.03 QUALITY ASSURANCE

- A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as approved by the Program Manager.
- B. Accuracy of records:
 - 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.
 - 2. Accuracy of records shall be such that future searches for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.
- C. Make entries within 24 hours after receipt of information that the change has occurred.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of all recorded data to the final Project Record Documents.

- B. In the event of loss of recorded data, use any means necessary to again secure the data needed to comply with this section.
 - 1. Such means shall include, if necessary in the opinion of the Program Manager, removal and replacement of concealing work or materials by Contractor at Contractor's expense.

PART 2 PRODUCTS

2.01 RECORD DOCUMENTS

- A. Job set: Promptly following the Notice to Proceed, secure from the Program Manager at no charge to the Contractor one complete set of all Documents comprising the Contract.

PART 3 EXECUTION

3.01 MAINTENANCE OF JOB SET

- A. Immediately upon receipt of the job set described in Paragraph 2.01-A above, identify each of the Documents with the title, "RECORD DOCUMENTS - JOB SET."
- B. Preservation:
 - 1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set to the approval of the Program Manager.
 - 2. Do not use the job set for any purpose except entry of new data and for review by the Program Manager, until start of transfer of data to final Project Record Documents.
 - 3. Maintain the job set at the site of Work or at another site as designated by the Program Manager.
- C. Making entries on Drawings:
 - 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
 - 2. Date all entries.
 - 3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
 - 4. In the event of overlapping changes, use different colors for the overlapping changes.
- D. Make entries in the pertinent other Documents as approved by the Program Manager.
- E. Drawings shall clearly show actual installed locations, depth, and sizes of:
 - 1. Pipe work of all descriptions below ground outside of building and structures, including locations of culverts, storm & sewer lines, water lines, cleanouts, manholes, inlets, hydrants, and underground valves.
 - 2. Underground electrical conduits, electrical ducts, and directly buried conductors light cables, FAA cables including locations of pull and junction boxes, electric manholes and handholes, pad mounted electrical equipment, utility poles, electrical outlets, and lighting fixtures.

3. All existing underground facilities unearthed by Contractors operations not accurately shown on the drawing.

F. Conversion of schematic layouts:

1. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items, is shown schematically and is not intended to portray precise physical layout.
 - a. Final physical arrangement is determined by the Contractor, subject to the Program Manager's review.
 - b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items, which are shown only schematically, on the Drawings. This information will be provided by the Contractor.
2. Show on the job set of Record Drawings, by dimension accurate to within one half foot, the centerline of each run of items such as are described in subparagraph 3.01-E above.
 - a. Clearly identify the item by accurate note such as "24 inch R.C. pipe drain", "4" conduit" and the like.
 - b. Show, by symbol or note, the vertical location of the item ("36 inches deep"), "exposed," and the like.
 - c. Make all descriptive identification so that it may be related reliably to the Specifications.
3. The Program Manager may waive the requirements for conversion of schematic layouts where, in the Program Manager's judgment, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the Program Manager.

3.02 FINAL PROJECT RECORD DOCUMENTS

- A. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.
- B. Approval of recorded data prior to transfer to Program Manager:
 1. Secure the Program Manager's review of all recorded data.
 2. Make required revisions.
- C. Transfer of data to other Documents:
 1. If the Documents other than Drawings have been kept clean during progress of the Work, and if entries thereon have been orderly to the approval of the Program Manager, the job set of those Documents other than Drawings will be accepted as final Record Documents.
 2. If any such Document is not so approved by the Program Manager, secure a new copy of that Document from the Program Manager at the Program Manager's usual charge for reproduction and handling, and carefully transfer the change data to the new copy to the

approval of the Program Manager.

- D. Review and submittal:
 - 1. Submit the completed set of Project Record Documents to the Program Manager as described in Paragraph 1.02-C above.
 - 2. Participate in review meetings as required.
 - 3. Make required changes and promptly deliver the final Project Record Documents to the Program Manager.

3.03 CHANGES SUBSEQUENT TO ACCEPTANCE

- A. The Contractor has no responsibility for recording changes in the Work subsequent to Final Completion, except for changes resulting from work performed under Warranty.

END OF SECTION 01720

DIVISION 1 – SECTION 01730**CUTTING AND PATCHING****PART 1 GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for cutting and patching.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Coordination" for procedures for coordinating cutting and patching with other construction activities.
 - 2. Division 2 Section "Selective Demolition" for demolition of selected portions of the building for alterations.
 - 3. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - a. Requirements of this Section apply to mechanical and electrical installations. Refer to Division 15 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.3 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
 - 1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Foundation construction.
 - b. Bearing and retaining walls.
 - c. Structural concrete.
 - d. Structural steel.
 - e. Lintels.
 - f. Timber and primary wood framing.
 - g. Structural decking.
 - h. Stair systems.
 - i. Miscellaneous structural metals.
 - j. Exterior curtain-wall construction.
 - k. Equipment supports.
 - l. Piping, ductwork, vessels, and equipment.
 - m. Structural systems of special construction in Division 13 Sections.
- B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch

operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. Primary operational systems and equipment.
 - b. Air or smoke barriers.
 - c. Water, moisture, or vapor barriers.
 - d. Membranes and flashings.
 - e. Fire protection systems.
 - f. Noise and vibration control elements and systems.
 - g. Control systems.
 - h. Communication systems.
 - i. Conveying systems.
 - j. Electrical wiring systems.
 - k. Operating systems of special construction in Division 13 Sections.

- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.
 1. If possible retain the original Installer or fabricator to cut and patch the exposed Work listed below. If it is impossible to engage the original Installer or fabricator, engage another recognized experienced and specialized firm.
 - a. Processed concrete finishes.
 - b. Stonework and stone masonry.
 - c. Ornamental metal.
 - d. Matched-veneer woodwork.
 - e. Preformed metal panels.
 - f. Firestopping.
 - g. Window wall system.
 - h. Stucco and ornamental plaster.
 - i. Acoustical ceilings.
 - j. Terrazzo.
 - k. Finished wood flooring.
 - l. Fluid-applied flooring.
 - m. Carpeting.
 - n. Aggregate wall coating.
 - o. Wall covering.
 - p. Swimming pool finishes.
 - q. HVAC enclosures, cabinets, or covers.

1.4 WARRANTY

- A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
 - 1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
 - 1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size

required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
4. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating and backfilling.
5. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and re-place with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
4. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.4 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely re-move paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore dam-aged pipe covering to its original condition.

END OF SECTION 01730

DIVISION 1 – SECTION 01741**CLEANING****PART 1 GENERAL****1.01 SUMMARY**

- A. Throughout the construction period, maintain the site in a standard of cleanliness including mowing of grass as described in this Section. All demolition or construction debris (FOD) shall be confined within the work site at all times.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Division 0, Division 1 and other Sections of these Specifications.
 - 2. In addition to the standards described in this Section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.
 - 3. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

1.02 QUALITY ASSURANCE

- A. Conduct a daily inspection, and more often if necessary, to verify that cleanliness requirements are being met.
- B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 PRODUCTS**2.01 CLEANING MATERIALS AND EQUIPMENT**

- A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.
- B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

2.02 COMPATIBILITY

- A. Use only cleaning materials and equipment compatible with the surface being cleaned and as recommended by the manufacturer of the material.

PART 3 EXECUTION**3.01 PROGRESS CLEANING**

- A. General:
 - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.

2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
 3. Inspect all haul vehicles leaving the site to make sure no debris can fall from the vehicle during transportation.
 4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
- B. Site:
1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage. Contractor shall document all daily inspections.
 2. Weekly, and more often if necessary, remove, completely, all accumulated scrap, debris, and waste material from the site.
 3. Maintain the site in a neat and orderly condition at all times.
 4. Mowing of grass within the construction limits is required at a minimum of every two (2) weeks during the active growing season, or as directed by the Engineer or Owner.

3.02 FINAL CLEANING

- A. "Clean," for the purpose of this section, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by material sweepers and vacuums.
- B. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.01 above.
- C. Site:
1. Unless otherwise specifically directed by the Owner or Engineer, broom clean paved areas on the site and public paved areas adjacent to the site.
 2. Completely remove resultant debris.
- D. Schedule final cleaning as approved by the Owner or Engineer to enable the Owner to accept a completely clean Work.

3.03 CLEANING DURING OWNER'S OCCUPANCY

- A. Should the Owner occupy the Work or any portion thereof, prior to its completion by the Contractor, and acceptance by the Owner, responsibilities for interim and final cleaning shall be as determined by the Engineer or Owner in accordance with the Division 0 and Division 1 Specifications.

3.04 INTERVENTION OF OWNER

- A. If the Contractor fails to clean up any debris which is deposited as a result of construction/demolition operations, or fails to mow grass as stipulated, the Airport Authority will, after attempting one notification, immediately do so and the cost thereof will be charged to the Contractor at the rate of two hundred and fifty dollars (\$250.00) per hour, per machine and per person additively. The Contractor shall assume full responsibility for failure to perform cleanup operations required.

END OF SECTION 01741

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DIVISION 1 - SECTION 01770**CONTRACT CLOSEOUT****PART 1 - GENERAL****1.01 SECTION INCLUDES**

- A. Procedures and requirements for closing out the Work.
 - 1. Closeout submittals.
 - 2. Final cleaning.
 - 3. Record Documents.
 - 4. Substantial completion.
 - 5. Final inspection.
 - 6. Final payment.
 - 7. Warranties.

1.02 RELATED REQUIREMENTS AND SECTIONS

- A. Section 01100 - Summary of Work, Sequence of Construction & Liquidated Damages.

1.03 CLOSEOUT SUBMITTALS

- A. Record documents of the constructed work.
- B. Certificate of Occupancy.
- C. Warranties: This Section and applicable Sections of these Specifications.
- D. Contractors Affidavit of Payment of Debts and Claims and Contractors Affidavit of Release of Liens.
- E. Consent of Surety to Final Payment.
- F. As-built drawings.

1.05 FINAL CLEANING

- A. Clean work and storage areas free of trash. Broom clean and hose wash walks and pavements.

1.06 RECORD DOCUMENTS

- A. Definition:
 - 1. Dimensioned drawings showing in-place components and systems measured as accurately as practicable.
 - 2. Product data and other documents clearly identifying proprietary product and equipment incorporated into the Work.
- B. Maintain at job site one record copy of:
 - 1. Contract Drawings and As-built Drawings.
 - 2. Project Manual.

3. Addenda.
 4. Approved shop drawings.
 5. Contract Modifications.
 6. Field test records.
 7. Meeting minutes (notes).
- C. Make documents available at all times for inspection by Engineer and Owner.
- D. Marking Devices:
1. Use colored felt marking pens for marking prints and product data.
- E. Label each document "PROJECT RECORD" in 1" high printed letters.
- F. Record information concurrent with construction progress. Do not conceal any work until required information has been recorded.
- G. Submittal of Record Documents:
1. At completion of the Work, deliver Record Documents to Owner or Engineer with request for Final Payment.
 2. Accompany submittal with transmittal letter indicating:
 - a. Date
 - b. Project title
 - c. Contractor's name and address
 - d. Title and number of each record document
 3. Submit one reproducible copy and one electronic copy of Record Documents, and provide one copy of other Record Documents.
 4. Provide one AutoCAD Diskette

1.07 SUBSTANTIAL COMPLETION

- A. When Contractor considers the Work to be substantially complete as defined in Conditions of the Contract, Contractor shall prepare and submit a list (punch list) of items to be completed or corrected. Upon receipt of Contractor's list, Owner or Engineer will decide if the Work is substantially complete and, if necessary, will prepare a supplemental list (punch list) of items to be completed or corrected.
- B. Failure to include items on the punch list does not alter responsibility of Contractor to complete work according to Contract Documents.
- C. Before Owner or Engineer issues a Certificate of Substantial Completion, Contractor shall provide certificate of Use and Occupancy and evidence of approval from applicable governing authorities.

1.08 FINAL INSPECTION

- A. When Owner or Engineer receives written notice that the Work is ready for final inspection, and when final application for payment is received, Owner or Engineer shall promptly inspect to determine if the Work complies with the Contract Documents.
- B. Provide Owner or Engineer with written status report of each punch list item before final inspection.

1.09 FINAL PAYMENT

- A. Final payment will be made to contractor by Owner within 45 days after:

1. Completion of the Work.
2. Acceptance by Owner and Engineer of all work performed under the Contract.
3. Receipt of Project Record Documents.
4. Receipt of O & M data, manufacturer's instructions, service manual, parts manual, warranties, and other closeout submittals specified. O & M data must include a list of recommended vendors for any non-standard replacement parts and must include a detailed Preventative Maintenance guide with a schedule of suggested efforts.
5. Preparation by Contractor and approval of Owner of final statement of cost of the completed Work. Final statement shall indicate:
 - a. Original Contract Sum.
 - b. Previous Change Orders.
 - c. Deductions for liquidated damages.
 - d. Other applicable adjustments to Contract Sum.
 - e. Total Contract Sum as adjusted.
 - f. Previous Payments.
 - g. Final payment remaining due.
6. Upon completion by Contractor of work covered by Contract Documents, and before final payment to Contractor for work performed, Contractor shall deliver to Owner an affidavit, indicating that all labor and material used on or for execution of the Work has been paid.

1.10 WARRANTIES

- A. Provide duplicate notarized copies of warranties required by Contract Documents. Accumulate executed documents by subcontractors, suppliers, and manufacturers; provide table of contents and assemble in binder with durable plastic cover properly titled.
- B. Warranties are in addition to and not a limitation of other rights Owner may have against Contractor under the Contract Documents.
- C. Contractor shall bear costs of correcting work not complying with warranty requirements.
- D. Duration of warranties required by individual Sections shall indicate minimum times and shall not relieve Contractor of obligations required under applicable statutes or other Conditions of the Contract.
 1. Warranty period begins on date of Substantial Completion, except where modified by Conditions of the Contract.
 2. Warranties are non-prorated unless stated otherwise in these Specifications.
- E. Manufacturer's warranties shall be backed by assets of manufacturer and not a third party.
- F. Warranties shall be transferable.
- G. Submit warranties to Owner or Engineer for verification and submittal to Owner with Contractor's final Application for Payment.
- H. Re-submit warranties that do not comply with Contract Documents.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

END OF SECTION 01770

**DIVISION 1 – SECTION 01771
AFFIDAVIT OF CONTRACTOR**

STATE OF _____

COUNTY OF _____

_____, being duly sworn according to Law,
(Name of Affiant)

deposes and says that he is the _____ of
(Title)

_____, the Contractor, in a
(Name of Contractor)

Construction contract entered into between the Contractor and Memphis-Shelby County Airport Authority, the Owner, for the construction of A Baggage Makeup Carousel Replacement - Design/Build, MSCAA Project No. 19-1423-10-01, and that he is authorized to and does make this Affidavit on behalf of said Contractor in order to induce the Owner to make payment to the Contractor, in accordance with the provisions of the said Construction Contract.

Affiant further says that all persons who have furnished materials, labor, and equipment in connection with the construction of the facilities have been paid in full, and that the names of all manufacturers, materialmen, subcontractors and DBE subcontractors that furnished any material and/or services in connection with such construction and the kind of kinds of material and/or services so furnished are as listed hereinafter.

Affiant further certifies that he/she is familiar with the materials used in the construction of and incorporated into, the Project referenced above and attests that no asbestos-containing materials, either friable or otherwise, were used in the process of constructing or incorporated into the construction of the Project.

(Signature of Affiant)

Sworn to and subscribed before me this _____ day of _____ 20_____.

(Notary Public)

My commission expires: _____

DIVISION 1 – SECTION 01772

**FINAL LIEN WAIVER AND RELEASE
PRIME CONTRACTOR**

**STATE OF TENNESSEE
COUNTY OF SHELBY**

The undersigned _____ (hereinafter “Contractor”) has entered into a Contract with the Memphis-Shelby County Airport Authority (“Owner”) for the construction of improvements known as the:

A Baggage Makeup Carousel Replacement - Design/Build
Memphis International Airport
MSCAA Project No. 19-1423-10-01 (hereinafter “the Project”).

Upon the receipt of the sum of \$_____, the undersigned forever waives and releases any and all liens or claims of liens it has upon the foregoing described real property on account of labor, materials, equipment or services furnished for said Project. The undersigned certifies that all payments have been made for all work/materials performed to date for all subcontractors and suppliers with the exception of the amount due as a result of the payment amount shown above; and, that all subcontractors and suppliers will be paid all balances due upon receipt of the payment amount shown above. Further, the undersigned does hereby waive, release and relinquish any and all claims or demands against the Owner and Engineer of the above-described Project, the right to assert a mechanic’s and materialmen’s lien and/or any claim for quantum meruit or unjust enrichment, additional work, verbal agreements, increased cost, scheduling damages, including, but not limited to damages for delay, disruption, acceleration and/or interference, whether existing now or arising in the future.

The undersigned certifies and warrants that it has complied with all federal, state and local tax laws, including Social Security laws and Unemployment Compensation laws and workers’ compensation laws insofar as applicable to the performance of the Project. Further, the undersigned certifies and warrants that it has paid all of its subcontractors, vendors, and materialmen for services rendered in connection with the construction and improvement of the Project and that all labor, materials and equipment are free and clear of claims, security interests, indebtedness or encumbrances. The undersigned agrees to indemnify and hold harmless the Owner and the Engineer from and against any and all claims, damages, losses and expenses, including but not limited to, attorney’s fees, arising out of or resulting from any non-payment by the undersigned to any subcontractor, laborer, vendor or materialman for the Project.

As of this date, no mechanics’ or materialmen’s liens have been filed of record arising out of or related to the work performed by the undersigned.

Given under hand and seal this ____ day of _____, 20_____.

CONTRACTOR

By: _____

Title: _____

**STATE OF TENNESSEE
COUNTY OF SHELBY**

Before me, a notary public of the state and county mentioned, personally appeared _____, with whom I am personally acquainted, and who, upon oath, acknowledged such person to be _____, an officer authorized to execute the instrument, of _____, the within named bargainor, a corporation, and that such officer, as such _____, executed the foregoing instrument for the purposes therein contained, by personally signing the name of the corporation as _____.

Witness my hand and seal, at office, this ____ day of _____, 20_____.

Notary Public

My Commission Expires:

END OF SECTION 01772

DIVISION 1 – SECTION 01774
CONTRACTOR WARRANTY FORM

PROJECT: MSCAA Project No. 19-1423-10-01, A Baggage Makeup Carousel Replacement - Design/Build

LOCATION: Memphis International Airport, Shelby County, Tennessee

OWNER: Memphis-Shelby County Airport Authority

We _____, Contractor
(Company Name)

for the above-reference project, do hereby warrant all labor and materials furnished and work performed are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of one year.

This warranty commences on _____ and expires on _____.

This warranty covers that portion of the project described below:

ALL MATERIALS, LABOR, AND EQUIPMENT IN CONNECTION WITH THE CONSTRUCTION OF THE FACILITIES OF THE ABOVE REFERENCED CONTRACT.

The Contractor shall promptly correct all defective Work to comply with the Contract Documents whether observed before or after the substantial completion date and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting defective Work.

If, within one (1) year after the substantial completion date, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee or warranty required by the Contract Documents, any of the Work is found to be defective and not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner, or the Engineer to do so.

All defective or non-conforming Work shall be removed from the site of the Work if necessary, and the Work shall be corrected to comply with the Contract Documents without cost to the Owner. The Contractor also shall bear the cost of making good all work of other contractors destroyed or damaged by removal or correction of the defective Work of Contractor.

If the Contractor fails to timely and properly correct defective Work, the Owner may correct it and hold the Contractor liable for all costs, expenses and damages, including attorney’s fees and litigation costs incurred by Owner in correcting it.

In addition to the foregoing warranty, a warranty period of one (1) year shall apply under the same terms and conditions as the original warranty, to any work, supplied in correction of defective work under warranty pursuant to the provisions of this Section 17.04 and the Contractor shall assign to the Owner any warranties, including extended warranties, which are available in connection with the performance of such correction of defective Work. The warranty period shall commence on the date the Owner accepts the corrective Work of the Contractor.

DATE: _____ FOR: _____
(Company Name)

BY: _____
TITLE: _____

END OF SECTION 01774

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DIVISION 1 – SECTION 01775

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

To: Memphis-Shelby County Airport Authority
2491 Winchester Road, Suite 113
Memphis, TN. 38116-3856

Regarding Contract for: A Baggage Makeup Carousel Replacement - Design/Build

Project: 19-1423-10-01

Dated: _____

CONTRACTOR: _____

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the

(here insert name and address of Surety Company)

_____, SURETY COMPANY,

on bond of _____
(here insert name and address of Contractor)

_____, CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to Memphis-Shelby County Airport Authority, OWNER.

IN WITNESS WHEREOF,
the Surety Company has hereunto set its hand this _____ day of _____, 20_____

Surety Company

Signature of Authorized Representative

Title

Attest:
(Seal):

END OF SECTION 01775

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DIVION 1 – SECTION 01783**ELECTRICAL CHARACTERISTICS, CAPACITIES AND WIRING DIAGRAMS****PART 1 GENERAL****1.01 SUMMARY**

- A. This section describes the electrical characteristics, sizes, capacities, ratings and wiring diagrams required of electrically operated equipment.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to Division 0, Division 1 and other Sections of these Specifications.

1.02 SUBMITTALS

- A. Furnish with each item of electrically operated equipment a wiring diagram showing all necessary electrical connections required to operate the equipment properly, in accordance with drawing and specification requirements.
- B. Furnish a composite wiring diagram showing all necessary interlock and related wiring between the various items of electrically operated equipment and their controls, as required to operate interlocked equipment as specified in other sections of these specifications and as indicated.

1.03 CAPACITIES, RATINGS, SIZES, AND OTHER REQUIREMENTS NOT SPECIFIED:

- A. For all items of material and/or equipment, the capacities, ratings, sizes, and other requirements thereof not specified shall be as indicated on the Contract drawings.
- B. Where capacities, ratings, sizes, and other requirements for materials and/or equipment is neither specified nor indicated on the Contract drawings, refer each case to the Owner or Engineer before ordering the materials and/or equipment involved, or proceeding with the work involved. The Owner's or Engineer's decision shall govern.

1.04 ELECTRICAL CHARACTERISTICS AND SIZES OF ELECTRICALLY OPERATED EQUIPMENT

- A. Each electrically operated item furnished under this contract shall operate proper on the electrical supply to which it is to be connected, as indicated on the electrical drawings.
- B. All electrically operated equipment shall operate on a 60 hz alternating current supply, unless otherwise indicated. Prior to delivery to the job site, it shall be the joint responsibility of the Contractor under the applicable section and the equipment supplier to determine from the electrical drawings the characteristics of the electrical supply indicated to each individual electrically operated item, and to furnish each electrically operated item accordingly.
 - 1. Where electrical characteristics are specified hereinafter, verify them from the electrical drawings. In the case of discrepancy between the specifications and the electrical drawings, the Electrical drawings shall govern.
 - 2. Where electrical characteristics cannot be determined from the electrical drawings, refer each case to the Owner or Engineer, and the Owner's or Engineer's decision shall govern.

END OF SECTION 01783

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DIVISION 1 – SECTION 01784
MANUFACTURER'S SUPERVISION

1.01 DESCRIPTION

A. Work included:

1. Furnishing Manufacturer's Supervision

B. Related Work:

1. Documents affecting work of this Section include, but are not necessarily limited to Division 0, Division 1, and other Sections of these Specifications.

1.02 SERVICES

A. Furnish the services of authorized qualified manufacturer's representatives as required to supervise the installation, testing, initial starting, adjusting, and initial operation of each equipment item or any other item designated by the Contract Documents and included in this Contract.

END OF SECTION 01784

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SECTION 13 01 00**BAGGAGE CLAIM CONTROL SYSTEM****PART 1- GENERAL****1.1 REQUIREMENTS**

- A. The General and Supplementary Conditions and Division 1 govern this Section.
- B. Refer to Section 130100 "General Requirements" for requirements applying to all sections of Division 13 including, but not limited to, the following:
 - 1. Inspection of the Site
 - 2. Verification of Utilities
 - 3. Requirements of Regulatory Agencies
 - 4. Drawings
 - 5. Safety Devices
 - 6. Guarantee

1.2 WORK INCLUDED

- A. Furnish and install a complete conveyor control systems for Terminal A outbound carousel conveyor feed system.
- B. Furnish, install and program a safety programmable logic controller (PLC).
- C. Furnish, install and program Operator Interface (OI) in door of main PLC panel.
- D. Furnish, install and configure photo eyes, safety door controls, emergency stop pushbuttons, alarm lights and all field devices.
- E. Furnish and install all control, power and communication wiring required to facilitate a complete and operational system.
- F. Develop all PLC control logic and all HMI/OI applications.
- G. The contractor shall prepare all control wiring diagrams and electrical interlocking diagrams and network architecture diagrams.
- H. Provide onsite testing, commissioning and startup.

1.3 REFERENCE STANDARDS

- A. All work must be performed in accordance with the requirements of the following pertinent standards and legal codes and ordinances:
 - 1. Standard Building Code and Publications referred to therein.
 - 2. Life Safety Code, NFPA No. 101.
 - 3. Occupational Safety and Health Act (OSHA).
 - 4. National Electrical Code (NEC).
 - 5. American National Standards Institute (ANSI).
 - 6. Standards and Periodicals Listings, Underwriters Laboratories.
 - 7. For work not specifically listed above, use the standards and codes of the National

- Fire Protection Association (NFPA).
8. National Fire Protection Association Standard for Electrical Safety in the Workplace, NFPA 70E.

1.4 QUALITY ASSURANCE

- A. The Contractor's attention is directed to the fact that all specified equipment and systems shall form a completely integrated system and, as such, the control system integrator shall become familiar with requirements necessary to provide equipment specified for the system regardless of manufacture, and shall be responsible to the Contractor for the complete and satisfactory operation of the entire plant instrumentation and control system.
 1. These specifications cover the intended function of the equipment, but do not necessarily cover all details necessary for a complete, operable and functional system. The Contractor shall supply all devices and appurtenances necessary to provide a complete, operable and satisfactory system as indicated or specified.
- B. Instrumentation and Control System Integrator:
 1. It is the intent of these documents that the Contractor be a qualified Instrumentation and Control System Integrator who shall provide the system as specified and indicated.
 2. The Instrumentation and Control System Integrator shall design and furnish a complete, integrated and functionally operating system, warranted to perform the intended functions as herein specified.
 3. Provide or supply all hardware and software specified herein or required and provide all required and specified collateral services in connection with the system such as testing, calibration, start-up, operation and maintenance manuals, and operator training without additional cost to the Owner.
 4. Provide system integration for all control systems furnished as packaged control systems with equipment.
 5. The Instrumentation and Control System Integrator shall be responsible to obtain all necessary data from individual manufacturers to determine the necessary interface requirements for operation, control and/or monitoring between the various process manufacturers' equipment and the system being supplied by the Instrumentation and Control System Integrator.
 6. Shall provide personal superintendence and direction of the work, maintaining and supplying complete supervision over and coordination between all subcontractors.
 7. Shall be responsible for defining the limits of the subcontractor's work.
 8. Shall be responsible for setting of instruments (including alarms, etc. as provided under other sections).

1.5 SUBMITTALS

- A. Comply with pertinent provisions of Section 130100.
- B. Within fourteen (14) calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
 1. Proposed construction schedule.
 2. Contact information for the Contractor's project manager and field superintendent for the project.
- C. Within thirty (30) calendar days after the Contractor has received the Owner's Notice

to Proceed submit:

1. Bill of materials of equipment indicating quantity, manufacturer and model number. Component manufacturing data sheet indicating pertinent data and identifying each component by item number and nomenclature as indicated on the drawings and in the specifications. Include technical data for operator workstations, interface equipment, control units, transducers/transmitters, sensors, actuators, valves, relays/switches, enclosures and operator interface units.
 2. Instrumentation list with element name, type of device, manufacturer, model number.
 3. Component drawing showing dimensions, mounting and external connection details.
 4. System wiring schematics, each on a single drawing with full description of operation. Component identification on the schematic shall be as indicated above.
 5. A system schematic of the hardware with the component manufacturing data sheets for each item, including all system peripherals. Drawing package shall include panel fabrication drawings, panel interior wiring schematics, network one line diagram with IP addresses, power wiring (instruments and panels), input/output (IO) field termination schematics.
- D. Provide Operation and Maintenance manuals complying with provisions of Section 130100.
- E. Provide to Engineer for approval any changes, additions, corrections, etc. required to the Bid Documents that are needed to accommodate the system being proposed. The changes, additions, corrections, etc. shall be at the Contractor's expense and shall be included in his Bid.

1.6 COORDINATION OF WORK

- A. The Contractor shall be responsible for reviewing the contract documents that could affect this portion of the work.
- B. Specifications, especially electrical and wiring requirements, have been formulated in an attempt to satisfy the conditions for any system proposed. However, a vendor may find that some changes or additional conduit and wiring from that indicated may be required to accommodate particular equipment being proposed. Should this be the case, the vendor shall include in his bid price, all changes or additional requirements necessary for the system. After award of contract, revised drawings must be submitted for approval indicating any changes prior to any changes being implemented.
- C. The Contractor shall coordinate with the Owner all plant outages seven (7) calendar days prior to proposed outage. The Contractor shall not shutdown any portion of the facility without prior written approval of the Owner.

1.7 PRODUCT DELIVERY, HANDLING AND STORAGE

- A. Comply with pertinent provisions of the contract documents.
- B. Schedule the delivery of the equipment to coordinate with the project completion schedule.
1. Each item of equipment to be tagged with identifying number shown on the Shop Drawings.
- C. Contractor's attention is directed to the fact that equipment has delicate components and extreme care shall be taken in handling to avoid internal and/or external damages.
- D. Damaged, remanufactured and/or used equipment shall not be accepted.

- E. Equipment not for immediate use shall be stored inside a building, with enclosures under protective coverings and shall be fully protected from moisture, extreme heat and vibration.

1.8 WARRANTY

- A. The warranty period shall be defined as One (1) year from date of Notice of Substantial Completion.
- B. Systems supplier shall provide onsite service with a 4-hour response time in normal working hours, seven (7) days per week for the length of the warranty period.
 - 1. For any warranty visit during this period, provide the Owner and Engineer with a written report stating the reason for equipment failure and recommendations to prevent recurrence.

1.11 INSTRUCTIONS TO OWNER

- A. Following items shall be required.
 - 1. After system commissioning and acceptance by Owner, the Contractor shall provide one (1) session, sixteen (16) hours of instruction to the Owner during the normal day. Instruction manuals shall be submitted to Owner's representative and approved prior to training sessions. Manuals shall be distributed at the training sessions. Instruction of operating personnel while commissioning/troubleshooting the system shall not be accepted as the Owner's training.
 - 2. The Contractor shall give detailed instruction to the Owner's maintenance and engineering personnel on operation of the Control System. The manual prepared by the Contractor shall be used in instruction. Refer to paragraph "Instructions and Service" for additional requirements.
 - a. Submit lesson plans to the Owner's representative for the training phases to include type of training to be provided and a list of reference material for review and approval by the Owner.
 - b. Training Program: Accomplish the training program as specified. A training day is defined as 8 hours of instruction including two 15-minute breaks and excluding lunch time, Monday through Friday. Conduct onsite training after acceptance run of system at a time mutually agreeable between the Contractor and the Owner. Training shall be provided to designated operating personnel identified by Owner in the functional operations of system and the procedures that personnel will follow in systems operation. This phase of training shall include but not be limited to:
 - 1) Operation of equipment.
 - 2) Setpoint adjustments.
 - 3) Diagnostics
 - 4) Failure recovery procedures
 - 5) Alarm response
 - 6) Maintenance and calibration

PART 2 - PRODUCTS

2.1 GENERAL

- A. The Contractor shall furnish and install a complete, tested and operational control system for

each Concourse B Baggage Claim conveyor and carousel system (four) including all equipment, wiring and appurtenances necessary for a complete system. The Contractor shall furnish and install a new safety programmable logic controller (PLC), operator interface (OI), emergency stop switches (E-Stop), jam switches/photo eyes, alarm lights and horns, safety motor contactors and control/motor starter enclosures associated with Concourse B Baggage Claim conveyors and carousels. The control system shall be coordinated with the conveyor system contractor. The new PLC systems (four) shall receive a dry contact closure from the existing access control system to initiate start and stop sequences of all conveyors and carousels. **This dry contact shall input shall be provided by Schneider Electric. Call Kenneth Kendra with Schneider Electric @ 919-463-3317.** Each carousel and associated conveyor system shall have its own safety PLC system and operate autonomously from others.

The Contractor shall furnish audible and visual notification prior to starting any conveyor or carousel. The carousels and conveyors shall be equipped with emergency stop pushbuttons at locations coordinated with the Owner and in compliance with code. The system shall control carousels baggage access doors and meet security requirements of the Owner.

Photo eyes and jam switches shall be located at every change of direction or elevation and as coordinated with conveyor system contractor. Emergency stop pushbuttons/cables shall meet OSHA and NFPA 70E code requirements. The system reset after a tripped emergency stop pushbutton shall require reset/restart confirmation from the OI, not just resetting the tripped E-Stop pushbutton.

The OI shall display status of each motor, E-Stop, photo eyes/jam switches and provide detailed descriptive alarm messages. Upon initialization of any alarm or E-Stop an audible alarm shall sound and alarm beacon illuminate. The control panel shall be equipped with a hardwired alarm silence and alarm reset pushbuttons. Alarms shall require manual reset, automatic resetting of alarms shall not be allowed.

E-Stops shall include redundant contacts with each E-stop contacts connected directly to safety PLC inputs providing a redundant self-checking system. Installing E-Stop wiring in series or looping through all switches shall not be permitted.

Safety motor contactors shall be installed in series with motor contactor used for start/stop control. Safety contactors shall be monitored.

- B. All equipment and materials shall be new, unused and proved by previous use of similar products to be completely suitable for the service intended.
- C. All of the equipment shall be the manufacturer's latest and proven design. Specifications and drawings call attention to certain features but do not purport to cover all details entering into the design of the Control system. The completed system shall be compatible with the functions required and other equipment furnished by the Contractor.
- D. All electrical components of the system shall be powered by 24vdc, except as otherwise indicated or specified.
- E. All contacts for control, remote motor operated, or electrically operated equipment shall be rated not less than 10 amperes on 120V unless otherwise specified herein.
- F. All systems and individual components, whether panel or field mounted units, shall be protected from voltage and/or current surges which may originate as a result of lightning or other external causes.

1. Protective equipment to be provided by the Control System supplier and installed in accordance with his recommendations.
 2. Schematics of the instruments submitted for approval to the Engineer shall indicate how this protection will be provided and identify the items of equipment which shall be used for this purpose.
- G. The Contractor shall maintain a red-line mark-up of drawings onsite during construction containing all field modifications. The Contractor shall develop record drawings from red-line mark-ups.
- H. It is the intent of these specifications that no proprietary hardware or software shall be used. All hardware and software shall be standard off the shelf equipment and software.
- I. The Memphis Airport Authority shall own all final developed PLC control logic, operator interface applications and Human Machine Interface applications. The programs/applications shall be turned over to the Owner in the programming software format with all documentation and no password protection.

2.2 AUTOMATIC CONTROL SYSTEM HARDWARE

This Programmable Logic Controller (PLC), Input/Output modules and communication modules shall be manufactured by Rockwell Automation / Allen-Bradley (no exceptions) as specified herein.

- A. The Safety PLC shall be an Allen-Bradley Compact GuardLogix 5370 catalog number 1769-L33ERMS as a minimum.
1. Digital input modules shall be 16 point 24 vdc digital input modules.
 2. Digital output modules shall be 8 point individually isolated output modules.
 3. Analog input modules shall be 8 channel modules.
 4. Analog output modules shall be 8 channel modules.
 5. Power supply shall be 24vdc input and provide 4A @ 5vdc and 2A @ 24vdc.
 6. Communication modules as required.

2.3 OPERATOR INTERFACE TERMINAL

- A. The Main PLC Panel mounted Operator Interface Terminal shall be Allen-Bradley PanelView Plus 7 Standard Terminal, Touch Screen, 10.4 inches, TFT Color, Single Ethernet, 24V DC, Windows CE OS License, 2711P-T10C21D8S.

2.4 GENERAL CONTROL PANEL REQUIREMENTS:

- A. Control (PLC) panels shall be designed with a control section containing only 24 vdc power sources.
- B. Power sources greater than 24 vdc shall be mounted in separate disconnect enclosures with 24 vdc power supplies to feed PLC panel. The panel shall be equipped with external indication of power supply status with external test ports that meet the requirements of NFPA 70E.
- C. Assembled control panels shall be UL508A listed and labeled.
- D. All wiring shall be run in white plastic wire duct with covers. Wire duct shall be sized so that no section of duct is more than 40% filled by cross-sectional area.
- E. All wiring shall be such that analog signal, AC power and control signals and communications signal are all routed, ducted, bundled or installed in conduit separate raceways. No mixing of services shall be allowed.

- F. All analog signal and communications cable shall be 100% shielded.
- G. Terminals (excluding ground terminals) shall be high density (maximum 0.25" wide, finger safe, single circuit, multi-rail mount, 600V AC/DC, 30 A and suitable for wire size up to #12 AWG. Terminals for 120 VAC wiring shall be white, 24 VAC wiring shall be gray and 24 VDC shall be blue. Terminals shall be Allen-Bradley No. 1492-J4 or approved equal.
- H. Ground terminals shall be single circuit (green/yellow color code) grounding terminal blocks, maximum 0.50" wide, wire size up to #16 AWG and be 35mm DIN rail mount. Terminals shall be Allen-Bradley No. 1492-WG4 or approved equal.
- I. Fused terminals shall be single circuit fusible terminal block with neon blown fuse indicator, 300V AC/DC, 12 A, suitable for wire size up to #12 AWG and be 35mm DIN rail mount. Fused terminals shall be Allen-Bradley No. 1492-H4 or approved equal.
- J. Circuit Breakers shall be single circuit thermal magnetic type, finger safe screw terminal, 277V AC, amp rating as indicated on contract drawings, suitable for wire size up to #6 AWG and be 35mm DIN rail mount. Circuit breakers shall be Allen-Bradley 1492-SP1C-XXX or approved equal.
- K. Ethernet switches shall be Allen-Bradley/Cisco Stratix or approved equal.
- L. Selector switches shall be 30.5 mm Type 4X, maintained position, watertight and oil tight with standard knob operators and the number of positions required by the Cycles of Control and contract documents. Each switch position shall activate a contact closure dedicated to that position. Selector switches shall be Allen-Bradley 800T or approved equal.
- M. Pushbuttons shall be 30.5 mm Type 4X, momentary spring return, watertight and oil tight with flush head unit. Depressing the switch shall activate contact closure. Button color codes shall be as follows:
- | | |
|-------------|-------|
| START: | Green |
| STOP: | Red |
| All Others: | Black |
- N. Pilot light units shall be 30.5 mm Type 4/13, 24 VDC LED, water tight and oil tight. Pilot light color code shall be as follows:
- | | |
|-----------|-------|
| RUN: | Green |
| STOP: | Red |
| POWER ON: | Amber |
- Pilot assemblies shall be Allen-Bradley 800T or approved equal.
- O. Relays shall be 24 VDC as required high density terminal block relays with Silver Ox contacts. Relays shall be Allen-Bradley 700-HL or approved equal.
- P. Large control enclosures shall be free-standing, single access, NEMA 12 carbon steel enclosures of a size sufficient to provide 20% unused panel space. The enclosures shall be constructed of 12 gauge carbon steel, seams continuously welded and ground smooth, no holes or knockouts, with lifting eyes, 3-point latching operated by oil-tight key-locking handle. Enclosures shall be complete with lights and large (24"X24") fold out shelf attached to interior of door. Enclosures shall be Hoffman or approved equal.
- Q. DIN mounting rail shall be symmetrical 35 mm standard aluminum rail. DIN rail shall be Allen-Bradley #1492-DR1.
- R. Safety contactors shall be Allen-Bradley IEC 100S/104s safety contactors appropriately sized for the controlled motor. Safety contactors shall be installed in series with motor control contactor with the safety contactor being monitoring by the safety PLC.
- S. Motor control contactors shall be appropriately sized for the controlled motor with

electronic overload relays. Motor control contactors shall be Allen-Bradley IEC Bulletin 100 contactors or approved equal.

- T. Emergency stop pushbuttons shall be mushroom head illuminated, with redundant contacts and legend plate. Redundant contacts shall be wired directly and individually to safety PLC inputs, no series wiring of E-Stop contacts shall be allowed.
- U. All field wiring shall be terminated by the Contractor.

2.5 ELECTRICAL CONTROL WIRING

- A. All field wiring shall comply with National Electrical Code and Division 26 "Electrical".
- B. All control wiring shall be furnished and installed by Division 26.
- C. All wiring shall be in conduit as specified in Division 26.
- D. Wire color code shall be as follow:

Black	-	120 VAC power
White	-	120 VAC neutral
Green	-	Ground
Red	-	120 VAC PLC input wiring
Orange	-	120 VAC PLC output wiring
Blue	-	24 VDC positive
White/Blue Strip	-	24 VDC negative
Yellow	-	Circuit conductors which remain energized when supply disconnecting means is off.

Field control wiring shall match the above color code.

2.6 ELECTRIC/ELECTRONIC INPUT DEVICES

- A. The system shall maintain the specified analog end-to-end accuracy throughout the warranty period from sensor to controller readout.

2.7 SOFTWARE DEVELOPMENT

The graphical user interface shall be a layered system starting from with a main menu of the facility and screens. Each area plan shall have active indication of motor run status, sensor run status, E-Stop status, etc. at the location of each sensor. From each area screens each system shall be selectable, which when selected shall to a detailed representation of the equipment in the system. All labeling of equipment and instruments shall match identification on contract drawings. A common navigation/information bar shall be present at the bottom of all screens.

- A. Overall site screen shall include the approximate location of selected equipment labeled to match the contract drawings.
- B. Area screens shall include the approximate location of all major equipment and instrumentation sensors. Equipment and instruments shall be labeled as on the contract drawings. The sensors shall also have active indication of the current value being sensed by the sensor.
- C. The detailed system screens shall show all sensors and automatic control devices. There shall be active indication of sensed values by each sensor. The current status of all gates (open/closed) and motors (running/stopped) shall be indicated. Each controlled device shall

be a selectable item, which when selected shall display an H-O-A mode selector for the device. Modes for controlled devices shall be as follows:

Single Speed Motors	-	Run-Off-Auto
Reversing Motors	-	Forward-Reverse-Off-Auto
Variable Speed Motors	-	Manual-Off-Auto

There shall be a 'MANUAL-OFF-AUTO" selector for each major piece of equipment which shall transfer all controlled devices for the piece of equipment to the selected mode.

- D. General screen features:
- 1) All screens shall display current time, date and logged-in user.
 - 2) All screens shall display any active alarms.
 - 3) All screens shall have a common navigation bar allowing one touch access to the alarm screen, log-in screen, home screen and trend screen directory.
- E. Alarm conditions shall be reported at Operator Interface display and shall be globally acknowledged.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Refer to Section I3010, "General Requirements – CONTROL System" for requirements applying to all sections of Division 13 including, but not limited to, the following:
1. Coordination
 2. Workmanship, Materials And Equipment
 3. Manufacturer's Recommendations
 4. Protection Of Work
 5. Utility Connections
 6. Patching
 7. Painting and Identification
 8. Adjustments
 9. Contractors Test and Balance
 10. Clean-Up

3.2 FIELD DEVICE IDENTIFICATION

- A. All wiring shall be labeled to match control wiring diagrams, labels shall be attached at each conductor termination point.

3.3 MARKING

- A. Junction box covers will be marked to indicate that they are a part of the control system.

3.4 IDENTIFICATION

- A. All control wires and cables shall be labeled. Wire, cable, terminal and fuse labels shall consist of the complete wire number matching exactly the number shown on the control wiring diagrams, custom printed on a single pressure sensitive, self-adhesive tape which wraps the entire circumference of the wire or cable. Hand writing or combining multiple labels to make the number shall not be permitted.

3.5 CONTROL DIAGRAMS

- A. Control diagrams shall show all control wiring, except that a common symbol may be used for a common electrical control power supply.
- B. Diagrams shall show all interlock wiring or control wiring to control equipment whether equipment is furnished as part of Section 130100 or by others. Any wiring other than power wiring (line to disconnect to starter to motor) shall be shown except the following:
 - 1. Internal wiring of packaged factory pre-wired equipment.

3.6 SYSTEM TEST AND STARTUP

- A. The Contractor shall verify each field instrument wiring termination and submit termination verification report.
- B. The Contractor shall provide personnel onsite during IO checkout and system startup.

3.7 RECORD DOCUMENTS

- A. Furnish as-built control wiring diagrams in AutoCAD format, one (1) 11x17 set in each control panel and two (2) 24x36 sets.
- B. Furnish all PLC logic programs fully documented in the programming software electronic format with no passwords.
- C. Furnish all HMI backup files fully documented in programming software electronic format with no passwords.

END OF SECTION

SECTION 26 05 00**COMMON WORK RESULTS FOR ELECTRICAL****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes:
 - 1. Sleeves for raceways and cables.
 - 2. Sleeve seals.
 - 3. Grout.
 - 4. Common electrical installation requirements.

1.2 SUBMITTALS

- A. Product Data: For sleeve seals.

PART 2 - PRODUCTS**2.1 SLEEVES FOR RACEWAYS AND CABLES**

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- C. Sleeves for Rectangular Openings: Galvanized sheet steel.
 - 1. Minimum Metal Thickness:
 - a. For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and no side more than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
 - b. For sleeve cross-section rectangle perimeter equal to, or more than, 50 inches (1270 mm) and 1 or more sides equal to, or more than, 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

2.2 SLEEVE SEALS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. Advance Products & Systems, Inc.
 - b. Calpico, Inc.
 - c. Metraflex Co.
 - d. Pipeline Seal and Insulator, Inc.
2. Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 3. Pressure Plates: Carbon steel. Include two for each sealing element.
 4. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.3 GROUT

- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

- A. Comply with NECA 1.
- B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
- C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
- D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
- E. Right of Way: Give to piping systems installed at a required slope.

3.2 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- C. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.

- E. Cut sleeves to length for mounting flush with both surfaces of walls.
- F. Extend sleeves installed in floors 2 inches (50 mm) above finished floor level.
- G. Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and raceway or cable, unless indicated otherwise.
- H. Seal space outside of sleeves with grout for penetrations of concrete and masonry
 - 1. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
- I. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Division 07 Section "Joint Sealants."
- J. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials. Comply with requirements in Division 07 Section "Penetration Firestopping."
- K. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
- L. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.

3.3 SLEEVE-SEAL INSTALLATION

- A. Install to seal exterior wall penetrations.
- B. Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.4 FIRESTOPPING

- A. Apply firestopping to penetrations of fire-rated floor and wall assemblies for electrical installations to restore original fire-resistance rating of assembly.

END OF SECTION

SECTION 26 05 13
MEDIUM-VOLTAGE CABLES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes cables, splices, terminations, and accessories for medium-voltage electrical distribution systems.

1.2 SUBMITTALS

- A. Product Data: For each type of cable, splice and termination.
- B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with IEEE C2 and NFPA 70.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Cables:
 - a. American Insulated Wire Corp.; a Leviton Company.
 - b. BICC Brand-Rex Company.
 - c. General Cable Corporation.
 - d. Kerite Co. (The); Hubbell Incorporated.
 - e. Okonite Company (The).
 - f. Pirelli Cables & Systems NA.
 - g. Rome Cable Corporation.
 - h. Southwire Company.
 - 2. Cable Splicing and Terminating Products and Accessories:
 - a. Engineered Products Co.
 - b. G&W Electric Co.
 - c. MPHusky.

- d. Raychem Corp.; Telephone Energy and Industrial Division.
- e. RTE Components; Cooper Power Systems, Inc.
- f. Scott Fetzer Co. (The); Adalet, Inc.
- g. Thomas & Betts Corporation.
- h. Thomas & Betts/Elastimold.
- i. 3M Company; Electrical Products Division.

2.2 CABLES

- A. THHN or equal for insulation.
- B. Cable Type: MV90, with copper conductor and concentric lay, class B stranding.
- C. Comply with UL-1072, AEIC CS8, ICEA S-93-639, and ICEA S-97-682.
- D. Strand Filling: Conductor interstices are filled with impermeable compound.
- E. Conductor Insulation: Crosslinked polyethylene.
- F. Shielding: Copper tape, helically applied over semiconducting insulation shield.
- G. Shielding and Jacket: Corrugated copper drain wires embedded in extruded, chlorinated, polyethylene jacket.
- H. Cable Jacket: Sunlight-resistant PVC.

2.3 SPLICE KITS

- A. Splice Kits: Comply with IEEE 404; type as recommended by cable or splicing kit manufacturer for the application.
 - 1. Combination tape and cold-shrink-rubber sleeve kit with re-jacketing by cast-epoxy-resin encasement or other waterproof, abrasion-resistant material.
 - 2. Heat-shrink splicing kit, polymeric construction with outer heat-shrink jacket.
 - 3. Premolded, cold-shrink-rubber, in-line splicing kit.
 - 4. Premolded EPDM splicing body kit with cable joint sealed by interference fit of mating parts and cable.

2.4 SOLID TERMINATIONS

- A. Multiconductor Cable Sheath Seals: Type recommended by seal manufacturer for type of cable and installation conditions, including orientation.
 - 1. Compound-filled, cast-metal body, metal-clad cable terminator for metal-clad cable with external plastic jacket.
 - 2. Cold-shrink sheath seal kit with preformed sleeve openings sized for cable and insulated conductors.
 - 3. Heat-shrink sheath seal kit with phase- and ground-conductor re-jacketing tubes, cable-end sealing boot, and sealing plugs for unused ground-wire openings in boot.
 - 4. Cast-epoxy-resin sheath seal kit with wraparound mold and packaged, two-part, epoxy-resin casting material.

- B. Shielded-Cable Terminations: Comply with the following classes of IEEE 48. Insulation class is equivalent to that of cable. Include shield ground strap for shielded cable terminations.
1. Class 1 Terminations: Modular type, furnished as a kit, with stress-relief tube; multiple, molded-silicone rubber, insulator modules; shield ground strap; and compression-type connector.
 2. Class 1 Terminations: Heat-shrink type with heat-shrink inner stress control and outer nontracking tubes; multiple, molded, nontracking skirt modules; and compression-type connector.
 3. Class 1 Terminations: Modular type, furnished as a kit, with stress-relief shield terminator; multiple-wet-process, porcelain, insulator modules; shield ground strap; and compression-type connector.
 4. Class 1 Terminations, Indoors: Kit with stress-relief tube, nontracking insulator tube, shield ground strap, compression-type connector, and end seal.
 5. Class 2 Terminations, Indoors: Kit with stress-relief tube, nontracking insulator tube, shield ground strap, and compression-type connector. Include silicone-rubber tape, cold-shrink-rubber sleeve, or heat-shrink plastic-sleeve moisture seal for end of insulation whether or not supplied with kits.
 6. Class 3 Terminations: Kit with stress cone and compression-type connector.
- C. Nonshielded-Cable Terminations: Kit with compression-type connector. Include silicone-rubber tape, cold-shrink-rubber sleeve, or heat-shrink plastic-sleeve moisture seal for end of insulation whether or not supplied with kits.

2.5 SEPARABLE INSULATED CONNECTORS

- A. Description: Modular system, complying with IEEE 386, with disconnecting, single-pole, cable terminators and with matching, stationary, plug-in, dead-front terminals designed for cable voltage and for sealing against moisture.
- B. Terminations at Distribution Points: Modular type, consisting of terminators installed on cables and modular, dead-front, terminal junctions for interconnecting cables.
- C. Load-Break Cable Terminators: Elbow-type units with 200-A load make/break and continuous-current rating. Include test point on terminator body that is capacitance coupled.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install cables according to IEEE 576.
- B. Pull Conductors: Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- C. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.
- D. Support cables according to Division 26 Section "Common Work Results for Electrical."

- E. Install direct-buried cables on leveled and tamped bed of 3-inch- (75-mm-) thick, clean sand. Separate cables crossing other cables or piping by a minimum of 4 inches (100 mm) of tamped earth.
 - 1. Install permanent markers at ends of cable runs, changes in direction, and buried splices.
 - 2. Install "buried-cable" warning tape 12 inches (305 mm) above cables.
- F. Install cable splices at pull points and elsewhere as indicated; use standard kits.
- G. Install separable insulated-connector components as follows:
 - 1. Protective Cap: At each terminal junction, with one on each terminal to which no feeder is indicated to be connected.
 - 2. Portable Feed-Through Accessory: Three.
 - 3. Standoff Insulator: Three.
- H. Ground shields and metal bodies of shielded cable at terminations, splices, and separable insulated connectors.

3.2 FIELD QUALITY CONTROL

- A. Testing: Perform the following field quality-control testing:
 - 1. Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.3.2. Certify compliance with test parameters.

END OF SECTION

SECTION 26 05 29**HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section includes:
 - 1. Hangers and supports for electrical equipment and systems.
 - 2. Construction requirements for concrete bases.

1.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design supports for multiple raceways, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.
- C. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
- D. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of [five] <Insert number> times the applied force.

1.3 ACTION SUBMITTALS

- A. Product Data: For steel slotted support systems.
- B. Shop Drawings:[Signed and sealed by a qualified professional engineer.] Show fabrication and installation details and include calculations for the following:
 - 1. Trapeze hangers. Include Product Data for components.
 - 2. Steel slotted channel systems. Include Product Data for components.
 - 3. Equipment supports.

1.4 INFORMATIONAL SUBMITTALS

- A. Welding certificates.

1.5 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

- B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Allied Tube & Conduit.
 - b. Cooper B-Line, Inc.; a division of Cooper Industries.
 - c. ERICO International Corporation.
 - d. GS Metals Corp.
 - e. Thomas & Betts Corporation.
 - f. Unistrut; Tyco International, Ltd.
 - g. Wesanco, Inc.
 2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
 3. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
 4. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
 5. Channel Dimensions: Selected for applicable load criteria.
- B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.
- C. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
- E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
- F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
 - a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Hilti Inc.

- 2) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - 3) MKT Fastening, LLC.
 - 4) Simpson Strong-Tie Co., Inc.; Masterset Fastening Systems Unit.
2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
- a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Cooper B-Line, Inc.; a division of Cooper Industries.
 - 2) Empire Tool and Manufacturing Co., Inc.
 - 3) Hilti Inc.
 - 4) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - 5) MKT Fastening, LLC.
3. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
 4. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
 5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
 6. Toggle Bolts: All-steel springhead type.
 7. Hanger Rods: Threaded steel.

2.2 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.
- B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
- C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted [or other] support system, sized so capacity can be increased by at least [25] <Insert number> percent in future without exceeding specified design load limits.
 1. Secure raceways and cables to these supports with single-bolt conduit clamps using spring friction action for retention in support channel.
- D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, EMT, IMC, and RMC may be supported by openings through structure members, as permitted in NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
 - 1. To Wood: Fasten with lag screws or through bolts.
 - 2. To New Concrete: Bolt to concrete inserts.
 - 3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
 - 4. To Existing Concrete: Expansion anchor fasteners.
 - 5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches (100 mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches (100 mm) thick.
 - 6. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
 - 7. To Light Steel: Sheet metal screws.
 - 8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Comply with installation requirements in Section 055000 "Metal Fabrications" for site-fabricated metal supports.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M.

3.4 CONCRETE BASES

- A. Construct concrete bases of dimensions indicated but not less than 4 inches (100 mm) larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.

- B. Use 3000-psi (20.7-MPa), 28-day compressive-strength concrete. Anchor equipment to concrete base.
 - 1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 2. Install anchor bolts to elevations required for proper attachment to supported equipment.
 - 3. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

3.5 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 - 1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05 mm).
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION

SECTION 26 05 33**RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes:
 - 1. Metal conduits, tubing, and fittings.
 - 2. Nonmetal conduits, tubing, and fittings.
 - 3. Metal wireways and auxiliary gutters.
 - 4. Nonmetal wireways and auxiliary gutters.
 - 5. Surface raceways.
 - 6. Boxes, enclosures, and cabinets.

1.2 ACTION SUBMITTALS

- A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

1.3 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of items involved:
 - 1. Structural members in paths of conduit groups with common supports.
 - 2. HVAC and plumbing items and architectural features in paths of conduit groups with common supports.
- B. Seismic Qualification Certificates: For enclosures, cabinets, and conduit racks and their mounting provisions, including those for internal components, from manufacturer.

PART 2 - PRODUCTS**2.1 METAL CONDUITS, TUBING, AND FITTINGS**

- A. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. GRC: Comply with ANSI C80.1 and UL 6.
- C. ARC: Comply with ANSI C80.5 and UL 6A.

- D. IMC: Comply with ANSI C80.6 and UL 1242.
- E. PVC-Coated Steel Conduit: PVC-coated rigid steel conduit.
 - 1. Comply with NEMA RN 1.
 - 2. Coating Thickness: 0.040 inch (1 mm), minimum.
- F. EMT: Comply with ANSI C80.3 and UL 797.
- G. FMC: Comply with UL 1; zinc-coated steel or aluminum.
- H. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.
- I. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.
 - 1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886 and NFPA 70.
 - 2. Fittings for EMT:
 - a. Material: Steel.
 - b. Type: compression.
 - 3. Expansion Fittings: PVC or steel to match conduit type, complying with UL 651, rated for environmental conditions where installed, and including flexible external bonding jumper.
 - 4. Coating for Fittings for PVC-Coated Conduit: Minimum thickness of 0.040 inch (1 mm), with overlapping sleeves protecting threaded joints.
- J. Joint Compound for IMC, GRC, or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

2.2 NONMETALLIC CONDUITS, TUBING, AND FITTINGS

- A. Listing and Labeling: Nonmetallic conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. ENT: Comply with NEMA TC 13 and UL 1653.
- C. RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.
- D. LFNC: Comply with UL 1660.
- E. Continuous HDPE: Comply with UL 651B.
- F. Coilable HDPE: Preassembled with conductors or cables, and complying with ASTM D 3485.
- G. Fittings for ENT and RNC: Comply with NEMA TC 3; match to conduit or tubing type and material.
- H. Fittings for LFNC: Comply with UL 514B.
- I. Solvent cements and adhesive primers shall have a VOC content of 510 and 550 g/L or less, respectively, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

- J. Solvent cements and adhesive primers shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.3 METAL WIREWAYS AND AUXILIARY GUTTERS

- A. Description: Sheet metal, complying with UL 870 and NEMA 250, Type 1 unless otherwise indicated, and sized according to NFPA 70.
 - 1. Metal wireways installed outdoors shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

2.4 NONMETALLIC WIREWAYS AND AUXILIARY GUTTERS

- A. Listing and Labeling: Nonmetallic wireways and auxiliary gutters shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Description: Fiberglass polyester, extruded and fabricated to required size and shape, without holes or knockouts. Cover shall be gasketed with oil-resistant gasket material and fastened with captive screws treated for corrosion resistance. Connections shall be flanged and have stainless-steel screws and oil-resistant gaskets.
- C. Description: PVC, extruded and fabricated to required size and shape, and having snap-on cover, mechanically coupled connections, and plastic fasteners.
- D. Fittings and Accessories: Couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings shall match and mate with wireways as required for complete system.
- E. Solvent cements and adhesive primers shall have a VOC content of 510 and 550 g/L or less, respectively, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.5 SURFACE RACEWAYS

- A. Listing and Labeling: Surface raceways and tele-power poles shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Surface Metal Raceways: Galvanized steel with snap-on covers complying with UL 5.
- C. Surface Nonmetallic Raceways: Two- or three-piece construction, complying with UL 5A, and manufactured of rigid PVC. Product shall comply with UL 94 V-0 requirements for self-extinguishing characteristics.

2.6 BOXES, ENCLOSURES, AND CABINETS

- A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.
- B. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.
- C. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, [ferrous alloy] [aluminum], Type FD, with gasketed cover.
- D. Nonmetallic Outlet and Device Boxes: Comply with NEMA OS 2 and UL 514C.
- E. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50 lb (23 kg). Outlet boxes designed for attachment of luminaires weighing more than 50 lb (23 kg) shall be listed and marked for the maximum allowable weight.
- F. Paddle Fan Outlet Boxes: Nonadjustable, designed for attachment of paddle fan weighing 70 lb (32 kg).
 - 1. Listing and labeling: Paddle fan outlet boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- G. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- H. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, galvanized, cast iron with gasketed cover.
- I. Box extensions used to accommodate new building finishes shall be of same material as recessed box.
- J. Device Box Dimensions: 4 inches square by 2-1/8 inches deep (100 mm square by 60 mm deep).
- K. Gangable boxes are allowed.
- L. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, Type 1 with continuous-hinge cover with flush latch unless otherwise indicated.
 - 1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
 - 2. Nonmetallic Enclosures: Fiberglass.
 - 3. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.
- M. Cabinets:
 - 1. NEMA 250, Type 1 galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 - 2. Hinged door in front cover with flush latch and concealed hinge.
 - 3. Key latch to match panelboards.
 - 4. Metal barriers to separate wiring of different systems and voltage.
 - 5. Accessory feet where required for freestanding equipment.
 - 6. Nonmetallic cabinets shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

PART 3 - EXECUTION**3.1 RACEWAY APPLICATION**

- A. Outdoors: Apply raceway products as specified below unless otherwise indicated:
1. Exposed Conduit: IMC.
 2. Concealed Conduit, Aboveground: EMT.
 3. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFNC.
 4. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
- B. Indoors: Apply raceway products as specified below unless otherwise indicated.
1. Exposed, Not Subject to Physical Damage: EMT.
 2. Exposed, Not Subject to Severe Physical Damage: EMT.
 3. Exposed and Subject to Severe Physical Damage: IMC. Raceway locations include the following:
 - a. Loading dock.
 - b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
 - c. Mechanical rooms.
 - d. Gymnasiums.
 4. Concealed in Ceilings and Interior Walls and Partitions: EMT.
 5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
 6. Damp or Wet Locations: IMC.
 7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 nonmetallic in institutional and commercial kitchens and damp or wet locations.
- C. Minimum Raceway Size: 1/2-inch (16-mm) trade size.
- D. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
 2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with this type of conduit. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.
 3. EMT: Use compression, steel fittings. Comply with NEMA FB 2.10. Set screws are not acceptable.
 4. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.
- E. Do not install aluminum conduits, boxes, or fittings in contact with concrete or earth.
- F. Install surface raceways only where indicated on Drawings.
- G. Do not install nonmetallic conduit where ambient temperature exceeds 120 deg F (49 deg C).

3.2 INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.
- B. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Arrange stub-ups so curved portions of bends are not visible above finished slab.
- D. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.
- E. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- F. Support conduit within 12 inches (300 mm) of enclosures to which attached.
- G. Raceways Embedded in Slabs:
 - 1. Run conduit larger than 1-inch (27-mm) trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support. Secure raceways to reinforcement at maximum 10-foot (3-m) intervals.
 - 2. Arrange raceways to cross building expansion joints at right angles with expansion fittings.
 - 3. Arrange raceways to keep a minimum of 2 inches (50 mm) of concrete cover in all directions.
 - 4. Do not embed threadless fittings in concrete unless specifically approved by Architect for each specific location.
 - 5. Change from ENT to RNC, Type EPC-40-PVC, GRC or IMC before rising above floor.
- H. Stub-ups to Above Recessed Ceilings:
 - 1. Use EMT, IMC, or RMC for raceways.
 - 2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
- I. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- J. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.
- K. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.
- L. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch (35-mm) trade size and insulated throat metal bushings on 1-1/2-inch (41-mm) trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

- M. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.
- N. Surface Raceways:
1. Install surface raceway with a minimum 2-inch (50-mm) radius control at bend points.
 2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inches (1200 mm) and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.
- O. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces.
- P. Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all raceways at the following points:
1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 2. Where an underground service raceway enters a building or structure.
 3. Where otherwise required by NFPA 70.
- Q. Expansion-Joint Fittings:
1. Install in each run of aboveground RNC that is located where environmental temperature change may exceed 30 deg F (17 deg C) and that has straight-run length that exceeds 25 feet (7.6 m).
 2. Install type and quantity of fittings that accommodate temperature change listed for each of the following locations:
 - a. Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F (70 deg C) temperature change.
 - b. Outdoor Locations Exposed to Direct Sunlight: 155 deg F (86 deg C) temperature change.
 - c. Indoor Spaces Connected with Outdoors without Physical Separation: 125 deg F (70 deg C) temperature change.
 - d. Attics: 135 deg F (75 deg C) temperature change.
 3. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per degree F (0.06 mm per meter of length of straight run per degree C) of temperature change for PVC conduits.
 4. Install expansion fittings at all locations where conduits cross building or structure expansion joints.
 5. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.
- R. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 72 inches (1830 mm) of flexible conduit for recessed and semirecessed luminaires, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

1. Use LFMC in damp or wet locations subject to severe physical damage.
 2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.
- S. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.
- T. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between the box and cover plate or the supported equipment and box.
- U. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.
- V. Locate boxes so that cover or plate will not span different building finishes.
- W. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.
- X. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.3 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.4 FIRESTOPPING

- A. Install firestopping at penetrations of fire-rated floor and wall assemblies. Comply with requirements in Section 078413 "Penetration Firestopping."

3.5 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.
1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION

**MSCAA
DESIGN GUIDE and CONSTRUCTION STANDARDS**

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Airfield Construction Standards

A. Joints and Joint Sealants

1. All joints to be beveled on new construction and reseal projects.
2. All concrete joint sealants to be a non-sag silicone or preformed material. Silicone is preferred on reseal projects.

B. Sodded Areas

1. All safety areas are to be 100% sod.
2. All areas that have had earth disturbed shall be sodded and fertilized.
3. Any sodded area within 2' of an apron, pad or drainage structure shall be compacted to a minimum of 95% (Modified Proctor).

C. Drainage

1. Concrete down drains should be installed on any area that is sloped for drainage.
2. Any drain pipes that travel outside the SIDA fence should have proper security grates installed.
3. Outlets should have a run off pad; concrete if preferred but asphalt is acceptable for aprons or run-off pads.
4. The sub-base for concrete down drains, drain inlets or outlets should be compacted to a minimum of 95% (Modified Proctor).
5. All drain and under drain joints or connections should be properly grouted or sealed. All drain inlets and manholes boxes entries shall be properly grouted or sealed inside and outside junction structure.

D. Concrete Aprons

1. All sign bases, junction boxes and manholes on new construction are to have a minimum of a 6 ft. apron around the sign or structure, sloped away from the sign or structure.
2. Aprons should have a minimum thickness of 4".
3. Aprons should be flush with the structure bases and sloped to be flush with soil. The slope shall not exceed the FAA maximum.
4. The sub bases should be compacted for the structure bases and aprons to a minimum of 95% (Modified Proctor).

E. Perimeter Fence

1. Perimeter fence shall be a minimum of 10' tall fabric and shall include three-stand, double-sided barbed wire and 18" diameter concentric razor wire secured at 12" spacing.
2. Perimeter fence shall include a 6' paved lane under the fence. This will eliminate washouts, animal intrusions, reduce maintenance, and allow easy inspections by Airport Police.
3. Rolling, automatic gate operators shall be commercially/industrially rated and designed for high-security environments. Operators for gates with openings less than 15 feet must

operate at a minimum speed of 20” per second. Operators for gates with openings 15 feet or wider must include variable frequency drives and operate at a minimum speed of 36” per second.

F. Construction Contractors

1. The Contractor shall maintain all sodded areas through the duration of the contract. The Contractor shall be responsible for the upkeep of contracted areas including grass cutting, rut repair and maintaining proper drainage ditches.
2. Security grates that are installed must be maintained and in good working order by the contractor for the duration of the contract.
3. All areas that were used by the contractor must be left in conditions that will not hinder the normal routine maintenance of Airfield; this includes, but is not limited to debris removal, grading, drainage, and re-seeding or sod.

Airfield Electrical Construction Standards

A. General

1. Work performed shall be accomplished by crews with a minimum of one licensed journeyman per three apprentices.
2. All temporary cable installations shall be protected either by burying cable in grass areas or by installation in conduit for above ground applications. Other methods may be used for short term or emergency situations if approved by the Airfield Maintenance Electrical Supervisor. Location of temporary cables shall be marked sufficiently to prevent damage from construction and maintenance equipment.
3. In all circumstances enough cable shall be provided at light cans, junction cans and hand holes so as to allow a minimum of 3 feet extending above ground for maintenance purposes. The exception to this is in the installation of taxiway centerline lights on SMGCS routes where two interleaved circuits are present in the same light can. In this instance only the circuit that is attached to the transformer in an individual light can, should have the extra conductor provided. This prevents the can from becoming cluttered unnecessarily.
4. Constant current series circuits shall be limited in capacity to a maximum of 20kW. Preferred capacity is 15kW or less.

B. Testing

1. The contractor shall furnish all necessary equipment and appliances for testing the underground cable circuits after installation.
2. The contractor shall demonstrate that all lighting power and control circuits are continuous and free from short circuits and unspecified grounds.
3. The insulation resistance to ground of all non-grounded series circuits shall be not less than 500 M Ω and shall be maintained at the required level by the contractor during the term of the warranty period.
4. Each new series circuit, or new part of existing circuits being extended or replaced, shall be tested as follows:
 - i. Low voltage megger tests shall be performed to comply with (c.) above. Circuits shall then be subjected to a Hi-Pot test in accordance with engineer's specifications.
5. All new fixture installations may, at the owner's request, be subjected to photometric testing to certify performance in accordance with FAA specifications.

C. Constant Current Regulators

1. The constant current regulators shall be magnetic designs; the susceptibility to extraneous signals of solid-state designs is not acceptable. The regulators shall not have solid-state controls in the series circuit and shall be designed to prohibit radio communications interference. The regulators shall limit transient current peaks without the use of solid-state series circuit controls with soft-on feature.
2. Each regulator shall include a true RMS ammeter, and ON/OFF/REMOTE switch and brightness controls.

3. In addition, the regulators shall be provided with SPDT contacts rated 2 amperes at 120 volts to indicate the following functions for remote monitoring:
4. REMOTE/LOCAL selected at control switch. Primary Power ON.
5. Constant current regulators, including standby regulators furnished or installed by the contractor shall be provided with seismic restraints and include all necessary equipment including control and monitoring equipment (Crouse-Hinds/Transtech digitrac units) to make the regulators operational.

D. Marking and Labeling

1. Wire identification. The contractor shall furnish and install self-sticking wire labels or identifying tags on all control wires at the point where they connect to the control equipment or to the terminal blocks.
2. Series circuit cables shall be identified with Thomas and Betts ty-rap #TY546MT or approved equivalent suitable for wet environments. Metal tags secured by tie wire or other means shall not be acceptable. All marking means shall be approved by the Airfield Maintenance Electrical Supervisor.
3. All conductors of series circuit conductors shall be marked with their circuit designation at all points where the conductor is accessible.
4. The contractor shall furnish and install engraved plastic labels on the cases of regulators, breakers, and distribution and control relay cases. All circuit breakers or other disconnecting means shall be marked and identified with their circuit designation.
5. Fiber optic runs should include #10 THWN stranded yellow tracer wire for locating purposes and connected in its entirety as a continuous conductor. Alternatively, armored fiber optic cables will be considered in lieu of tracer wire.
6. Underground electrical warning tape shall be installed above all underground conduit installations not concrete encased in unpaved areas. Warning tape shall be located as shown on the plans above the counterpoise wire.

E. Lighting Cans, Junction Cans, Junction Can Plazas and Hand Holes

1. Except in extreme cases where other means are not practical, manholes or hand holes larger than 4 feet x 4 feet x 4 feet deep shall not be used.
2. Hand holes shall be equipped with spring loaded/assisted hinged covers of a design easily opened by one person.
3. The preferred method of connectivity shall be by use of junction can plazas consisting of FAA L-868 cans installed in concrete plazas. Each can shall contain a single circuit with the designation of the circuit imprinted in a brass marker embedded in the concrete adjacent to the can. If deemed necessary, and at the approval of the Airfield Maintenance Electrical Supervisor, more than one circuit may be installed in a conduit/can. Can lids should be flush with concrete plazas with dam rings on the cans.
4. All ducts installed under paved areas shall be encased in concrete.
5. All unused conduits shall have the open ends plugged with removable tapered plugs and be provided with a pull rope equivalent to IDEAL Power-Fish pull line (200 lb strength)

6. Drain lines shall be installed to provide positive drainage to eliminate standing water in airfield lighting bases, junction cans, and hand holes in locations determined by the designer.
7. L-868 cans used for the installation of in-pavement lights shall be of a two-piece design with the top section including a multi-hole ring (VEGA #2419MEM) as manufactured by Jaquith Industries.
8. Fixture hold down bolts shall be all-thread stainless steel, type 304 or as recommended by the fixture manufacturer.
9. Fixture hold down bolts for in-pavement lights shall be tightened to the proper torque per fixture manufacture's specifications. All bolt holes shall be cleaned using a source of compressed air prior to installation of any bolts. Threads on all bolts shall be coated with anti-seize compound approved for use on stainless steel. Bolts shall not extend past the threaded adapter ring or into the can. Final tightening of the bolts shall be done using a properly calibrated torque wrench of the required range and verified by the engineer. Electrically or pneumatically operated wrenches shall not be used to achieve the final torque on bolts.
10. Lock washers installed on hold down bolts for all fixtures shall be one piece spring-type stainless steel. CRC type washers shall not be acceptable.
11. All cans shall have factory-installed hubs. Grommet cans are **not** acceptable unless approved for the application by the Airfield Maintenance Electrical Supervisor. Stub-in connections into existing light bases shall be Meyers hub installation.

F. Connectors

1. L-823 connectors used to splice L-824 type C #8 AWG cables shall be Elastimold style 54-D4-D4 or equivalent. L-823 connectors shall be made waterproof by a double layer of rubber tape (scotch 23 or equal) covered by a double layer of plastic tape (scotch 88 or equal). Heat shrink, is not allowable. One-piece shrink kits that encapsulate the entire splice shall not be used. Provide Scotch 23/Scotch 88 waterproofing at center connection to extend 1-1/2" each side of break and at each end of splice kit.

G. Fixtures

1. Runway and taxiway elevated light fixtures shall use a quartz bi-pin type lamp of the minimum wattage required for the application unless LED fixtures are approved by Airfield Maintenance Electrical Supervisor.
2. In-pavement fixtures should be manufactured of aluminum and utilize no more than two lamps with a maximum total wattage of 100 watts per fixture. L-850C edge lights and fixtures used for stop bars and runway guard lights may exceed this wattage, however.

H. Signs

1. Signs should be re-lampable without the use of tools.
2. Concrete foundations for signs shall contain separate housings for transformers. Transformers shall not be housed under a leg of the sign or any portion of the sign. Sign power should be fed through the sign leg.

3. Where practical, signs should be style 5, size 3, and be installed on a dedicated circuit.
4. All signs installed on the airfield should be marked on each end with 4" vinyl reflective labels with the sign's designation as shown on the plans.

Facilities Construction Standards

A. General

1. All work shall comply with the applicable construction codes and MSCAA standards. The contractor shall be responsible for construction code permits and shall arrange for all code required inspections. Copies of permits shall be supplied to the Manager of Building Maintenance.
2. Utilities will not be interrupted without prior coordination and approval from the MSCAA Building Maintenance Manager, telephone number (901) 922-8615 or the Maintenance Service Desk at (901) 922-8040. Approval is required for each and every interruption. A minimum of a 24-hour notice is required for utility interruptions.
3. All salvaged equipment shall be returned to MSCAA at their designated location for their use or disposed of off-site as directed by MSCAA.
4. Asbestos Containing Materials (ACMs) are specifically prohibited without specific written approval from MSCAA. Any installation of ACMs without prior written approval must be removed immediately by the installer in accord with local ACM removal regulations.

B. Penetrations

1. All concrete floor and roof penetrations must be accomplished by core drilling. Use of rotary hammer or other impact tools for this purpose is prohibited. Core drilling efforts must be coordinated with tenants occupying space below the cored floor slab. The contractor will be responsible for any damage resulting from core drilling.
2. Sealing of new and pre-existing floor penetrations must be filled full depth with hydraulic cement and sealed with epoxy or polyurethane caulk as noted under the Preferred Brands heading (pages 17 & 18). The installation shall be inspected by the MSCAA Development Division. Contractor shall coordinate with MSCAA Development Division for any x-ray or ultra-sound requirements for concrete floor/roof penetrations. No drilling through concrete beams unless approved by Development.
3. When drilling or core drilling through floors, walls, ceilings etc., the contractor is responsible for inspecting for electrical, plumbing, etc and is fully responsible for all repairs to anything damaged.
4. No drilling or ramset fastening is allowed in pan sections of the concrete structure. Any attachments installed above the ceiling will be suspended from the joist structure only.
5. No holes shall be drilled and no anchors shall be attached to the glazed brick, glazed wall tiles, or metal wall panels. Attachments shall be anchored in the mortar joints exclusively.
6. Penetrations through the roof are typically prohibited. When unavoidable, roof penetrations shall be coordinated with MSCAA and will be the responsibility of the contractor to restore the roof to such a condition as not to invalidate the roof warranty.
7. Hydraulic cement and core drill sealant shall be installed full depth. After curing, epoxy or polyurethane caulk shall be applied at the bottom of the plug and polyurethane caulk shall be applied at the top surface.

C. Signage

1. Signage shall comply with the standards established by MSCAA and final approval shall be the responsibility of MSCAA Development Division.

D. Electrical

1. Fiber optic runs should include #10 THWN stranded yellow tracer wire for locating purposes and connected in its entirety as a continuous conductor. Alternatively, armored fiber optic cables will be considered in lieu of tracer wire.
2. All electrical conductors will be installed in conduit and use of flex conduit is limited to runs of 6 feet or less. Conduit couplings and connectors utilizing setscrew fasteners are prohibited. Conduit shall be concealed from public view wherever possible. All conduits and electrical raceways shall contain an equipment grounding conductor.
3. All electrical conductors #14 AWG & larger shall be stranded copper wire unless otherwise approved in writing by MSCAA.
4. All emergency devices including emergency lights, exit lights, etc., shall be connected to emergency circuits. MSCAA does not allow battery packs.
5. MSCAA does not allow Bodine ballasts in fluorescent lighting fixtures. LED is preferred in all lay-in fixtures. Prior approval by Development must be received for use of fluorescent lay-in fixtures and the lamps shall be T8.
6. All use of cable trays is subject to MSCAA review and approval. Conduit installation must be independently supported and shall not be strapped to cable trays or any of the cable trays' support systems, including hangers and braces.
7. All equipment shall meet the appropriate UL listing for its intended purpose.
8. 23-kV rated cable shall conform to MLG&W standards. This requires cable having an aluminum or copper conductor, extruded conductor shield, ethylene propylene rubber insulation, extruded semi-conducting insulation shield, copper concentric neutral, and polyethylene jacket. The cable shall be suitable for direct burial, conduit/duct and aerial installations. All designers should re-verify MLG&W standards prior to publication of construction documents.

E. Mechanical

1. The use of flex duct shall not exceed more than four (4) feet and banded with metal straps, no tape. Use of flex duct other than at the end of a line or connected to air diffusers must be approved by MSCAA.
2. Controls for the HVAC system shall be open architecture and compatible with the JCI Metasys Extended Architecture System.
3. VAV Boxes shall be pressure dependent, electronic controls with no auxiliary fan or local filter.
4. A copy of the test and balance report shall be submitted to MSCAA Development. An independent contractor shall perform the testing and complete the report.
5. The contractor shall align all motors to the associated pump, gearbox, fan, etc. MSCAA Development and Maintenance shall inspect alignment prior to acceptance. Maximum

allowable angular and parallel misalignment is 0.003.

6. Heat trace cables shall have indicator lights installed in a visible location that illuminate when the cables are in operation.

7. [UV lighting in HVAC and HEPA \(MERV-14 Rating\) filtration systems.](#)

F. Plumbing

1. Brass ball valves shall be installed at the water supply point of origin and in the ceiling directly above any newly installed plumbing fixture where a utility chase wall is not present. If a walk-in utility chase exists, then ball valves shall be installed in the accessible chase no more than five (5) feet above finished floor. There shall be no more than 4 plumbing fixtures on one ball valve. Brass valve tags shall be placed on all newly installed valves clearly identifying the origin and destination.

G. Fire Alarm and Suppression Systems

1. The fire suppression system shall interface with the airport's Simplex Fire Alarm System.
2. All dry sprinkler pipe and fittings must be galvanized. All grooves in piping shall be the correct depth per industry standards.
3. See section Facilities Construction Standards – Construction Contractors for additional requirements.

H. Antennae

1. All work shall comply with the applicable construction codes and MSCAA standards.
2. No antenna is permitted on the roof; it must be installed within the infrastructure on one of the antenna farms or roof mounted antenna racks or in very limited cases with prior approval parapet mounted. Proposed antenna locations must be approved by MSCAA Development.
3. Cables are not allowed on the roof or to run bare down a wall. A conduit from the parapet location down the wall with an LB connector into the wall below the spandrel beam is required. Parapet mount must be properly sealed to prevent leaks through the concrete. Any wall penetrations must also be sealed. Cables from antennas mounted on racks must utilize the conduit pathway at the rack location.
4. Cables above the ceiling must be independently supported from the roof structure and run by a licensed low voltage contractor, or a licensed electrical contractor, in accordance with applicable codes.
5. Installer shall be responsible for construction code permits and shall arrange for all code required inspections. Copies of permits shall be supplied to the Manager of Building Maintenance.
6. MSCAA Maintenance will not provide the escort for antenna work; either installer or Operator must be badged or tenant will have to escort antenna personnel.

I. Miscellaneous

1. Relocation and/or removal of any security device including CCTV cameras, access control

equipment, etc. must be approved by MSCAA Development.

2. Non-shrink grout shall be used with all tile work, up to four (4) feet in height, laid on top of an approved waterproofing membrane.
3. All 12" X 12" ceiling tile shall be installed with the arrow on the back of the tile pointing south.
4. All flammable gas and liquid systems that are piped into buildings shall be properly equipped with seismic shutoff valves. Seismic shutoff valves shall be designed and installed to comply with all governing code requirements, insurance requirements, and MSCAA Construction Standard requirements. In the case of conflict between the listed requirements, the most stringent shall apply.
5. For in-pavement loop installations, loop wire must meet IMSA Spec 51-7. Lead-in wire, if needed, must meet IMSA Spec 50-2. Loop wire shall be one continuous length with no splices from the junction box or control cabinet and back again. The wire shall be twisted by hand four twists per foot in the lead-in slot. Loops must be cut in a rectangular shape, with each 90 degree corner transected with a 45 degree cut to prevent over bending/stressing of the loop wire. Loop saw cuts should be ¼" to 3/8" wide and a minimum of 1½" deep in concrete and 2" deep in asphalt. Loop Lead-in saw cuts should be 3/8" wide and a minimum of 1½" deep in concrete and 2" deep in asphalt. Properly seal the saw cuts with Dow Corning 890 SL self-leveling sealant.
6. The terrazzo floor shall be protected during construction. The removal, cutting, disfigurement or covering of the Terrazzo floor shall be reviewed and approved by MSCAA Development.
7. Only black steel pipe is permitted for use on systems containing diesel fuel, including tank vent stack piping, tank fill piping, and tank drain piping. No other material, including galvanized pipe, is allowed.
8. 90° brushed stainless steel corner protectors shall be installed on all new interior wall construction. The protectors shall be type 304 grade stainless, 22 gauge, 44" tall, 1.5" wings with a 3/8" wall grip edge, and a 1" radius at the top. Protectors shall be installed on top of the cove base and be adhered to the wall with F-26 construction adhesive.
9. Fire rated solid wood blocking that extends from wall stud to wall stud shall be installed for support of framed openings, wall mounted cabinets, wall mounted door hardware, wall mounted monitors, plumbing fixtures, toilet partitions, toilet accessories, mirrors, etc. on all new construction walls or remodels, excluding brick or block walls.
10. All fryers in kitchens must include automated in-line used cooking oil containment systems for proper collection and disposal. Tenants will be responsible for installation, maintenance, and used cooking oil recycling.

J. Construction Contractors

1. Electrical work performed shall be accomplished by crews with a minimum of one licensed journeyman per three apprentices.
2. The Contractor shall be responsible for maintaining a clean construction site and any space used for the removal of debris. The contractor shall be responsible for repair of any damage

caused by construction to as good or better condition.

3. If directed by Development the Contractor shall erect a temporary wall around the construction site. All temporary walls shall be constructed of metal studs; anchored on bottom with double stick tape and anchored to the roof deck on top (attachment to ceiling tiles or grid is prohibited). The outside (public side) of the wall shall be finished floor to ceiling with 5/8" drywall with 2 coats of flat off white latex paint. The bottom of the wall shall be trimmed with 4" black cove base. A 2"x6" chair rail, blocked 2" off the wall, shall be installed 36" to center above finished floor. The chair rail shall be sanded and painted with two coats of bronze paint (PPG Pitt-Tech Acrylic High Gloss DTM Industrial Enamel – Bronze Tone). The Contractor shall retain responsibility during construction to maintain the wall for aesthetic and security issues. MSCAA Development Division shall approve its location, any attachments to terrazzo floors and all signage and/or graphics. For short durations and in areas of limited public visibility, temporary walls may consist of metal studs and BC grade plywood with a high build primer and premium latex paint; use of these materials is allowed only with specific approval from MSCAA Development Division.
4. Walk-off mats shall be used at all access points to the construction area to prevent tracking of dust and debris and is responsible for cleanup if any dirt, dust and/or debris gets outside their construction limits.
5. When accessible to the public, the schedule of construction efforts and removal of debris shall be coordinated so as not to disrupt other tenants or endanger the safety of the public. Final approval shall be the responsibility of MSCAA Development Division. Unless directed otherwise, working at MEM requires a badge; coordinate with MSCAA Operations Division for specific project requirements. For badging information, the Identification Office telephone number is (901) 922-8005.
6. The contractor shall inform MSCAA Development Division, telephone number (901) 922-8033 at least 48 hours prior to startup of construction.
7. A set of completed as-built drawings shall be supplied to Development upon completion of the project.
8. Fire Alarm System – the Contractor shall contact Simplex to verify that the designer worked with Simplex during the design. If design is the responsibility of the Contractor, Contractor shall contact Simplex to design the installation.
9. A pre-test of the modifications to the fire alarm system shall be conducted with Simplex and the Contractor. This pre-test must be scheduled and successfully completed at least 24 hours in advance of any test with the Memphis Fire Department. MSCAA's Development Maintenance and Communications will participate in the pre-test, so close coordination is required. A minimum of 72 hours advanced notification is required to both Simplex and MSCAA to schedule the pre-test. The pre-test must be performed after hours. Upon completion of the pre-test, Simplex will provide written confirmation of the successful completion of the pre-test, a copy of which is to be provided to the MFD fire marshal, and a copy is to be provided to MSCAA.
10. The test with the Memphis Fire Department for occupancy must be performed after hours and closely coordinated with MSCAA Development, Maintenance and t Communications. Provide MSCAA a copy of any documentation from MFD, including deficiencies noted

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with the fire system, or approval of the system.

Painting Standards

A. Airfield

1. Airfield painting shall comply with the latest revision of the P-620 specification. Thermoplastic markings are not acceptable.

B. Roads

1. Road painting shall comply with the latest revision of the TT-P-1952 specification. Thermoplastic markings are not acceptable.

C. Paint Vendors

1. This vendor list is provided for reference only in regards to the specific products listed in the following paragraphs. The list is not exhaustive or exclusive as equivalent vendors will be considered by MSCAA Paint Shop.
2. PPG Architectural Finishes, Inc. (1525 Three Place, Memphis, TN, 38116)
3. Sherwin-Williams (3850 Lamar Avenue, Suite 1, Memphis, TN)
4. Farrell-Calhoun (3185 Millbranch Avenue, Memphis, TN)

D. Terminal, Concourses, and South Parking Garage

1. Exterior White Fasciae, Cargo Docks, Ramp, Walls, and Columns
 - i. Sherwin-Williams Universal Primer (or equivalent)
 - ii. PPG Pitt-Tech Acrylic Satin – White
 - iii. Sherwin-Williams A-100 Acrylic Satin – White
2. Exterior CMU Walls
 - i. Block Filler
 - ii. PPG Pitt-Tech Acrylic Satin – White
 - iii. Sherwin-Williams A-100 Acrylic Satin – White
3. Interior Walls
 - i. Sherwin-Williams B31W4400 Promar 400 Interior Latex Semi-Gloss – White
 - ii. Farrell-Calhoun Acrylic Interior Semi-Gloss Latex Enamel 650 – Carriage House
 - iii. Offices (including Airport Police, most of Building Maintenance, and Cargo Building Offices): Farrell-Calhoun Acrylic Interior Semi-Gloss Latex Enamel 650 – Carriage House
 - iv. Offices (Mezzanine & Apron level concourse B): Farrell-Calhoun Interior Premium Eggshell Latex Enamel 370 – Snowglory
 - v. Gypsum Ceilings/Walls: Pittsburgh Paints PPG 1006-1 Color: Gypsum Various Sheens
 - vi. Aluminum Curtainwall: Valspar Sherwin Williams Fluorpon Special Color: Special White 391B495

4. Doors and Frames
 - i. Brown Doors: Sherwin Williams Pro Industrial Acrylic Semi-Gloss – Kodiak Olive
 - ii. Green Doors: Sherwin Williams Pro Industrial Acrylic Semi-Gloss – Blarney Stone
 - iii. Brown Frames: Sherwin Williams Pro Industrial Acrylic Semi-Gloss – Bronze Tone
 - iv. Grey Frames and doors: Farrell-Calhoun Interior Alkyd Enamel Semi-Gloss – Zen Retreat
 - v. White Frames and doors (Concourse B): Farrell-Calhoun Interior Alkyd Enamel Semi-Gloss - Gypsum
5. Window Bases
 - i. Farrell-Calhoun Acrylic Interior Semi-Gloss Latex Enamel 650 – Carriage House
6. Exterior Metal Structures
 - i. Alkyd Industrial Gloss Enamel – White
 - ii. Alkyd Industrial Gloss Enamel – Farrell Calhoun Zen Retreat
7. Interior Metal Structure (Concourse B)
 - a. PT-2 Valspar Super Special White
8. Rotunda Columns (located in the “Y” of the B Concourse)
9. PT-2 Valspar Super Special WhiteID Office
 - i. Walls: Farrell-Calhoun Interior Premium Eggshell Latex Enamel 370 – Carriage House
 - ii. Doors and Frames: match Terminal & Concourses doors and frames
10. Management Work Room
 - i. Walls: Farrell-Calhoun Interior Premium Eggshell Latex Enamel 370 – Carriage House
 - ii. Doors and Frames: match Terminal & Concourses doors and frames
11. FIS
 - i. Walls: Farrell-Calhoun Acrylic Interior Semi-Gloss Latex Enamel 650 – Carriage House
 - ii. Doors: PPG Pitt-Tech Acrylic Satin DTM Industrial Enamel 90-475 – Quick Silver
 - iii. Frames: PPG Pitt-Tech Acrylic Satin DTM Industrial Enamel 90-709/05 – Dark Silver
12. Painted Floors (Building Maintenance areas)
 - i. Farrell-Calhoun Floor and Deck Enamel 702 – Medium Gray

E. Administration Building

1. Walls
 - i. Ceilings: Farrell-Calhoun Interior Premium Eggshell Latex Enamel 370 – Zurich White
 - ii. Walls: Farrell-Calhoun Interior Premium Eggshell Latex Enamel 370 – Carriage House

2. Interior Doors and Frames

- i. Sherwin-Williams Semi-Gloss Oil Base 1019 – Grey Statue

F. Airfield Maintenance Building

1. Walls

- i. Walls: Farrell-Calhoun Acrylic Interior Semi-Gloss Latex Enamel 650 – Carriage House

2. Doors and Frames

- i. Doors: PPG Pitt-Tech Acrylic Satin DTM Industrial Enamel 90-475 – Quick Silver
- ii. Frames: PPG Pitt-Tech Acrylic Satin DTM Industrial Enamel 90-709/05 – Dark Silver

G. Miscellaneous

1. De-Ice Tanks

- i. Farrell-Calhoun Premium Alkyd Industrial Gloss Enamel 800 – White

2. Exterior Light, Sign Pole, Sign Bases, and Bollards

- i. PPG Alkyd Industrial Enamel Gloss Z-Line – Bronze Tone

3. Ticket Spitters and Bollards

- i. Farrell-Calhoun Premium Alkyd Industrial Gloss Enamel 800 – Safety Zone Yellow

4. Colored Metal Surfaces

- i. Red: Farrell-Calhoun Premium Alkyd Industrial Gloss Enamel 800 – International Red
- ii. Orange: Farrell-Calhoun Premium Alkyd Industrial Gloss Enamel 800 – International Orange
- iii. Yellow: Farrell-Calhoun Premium Alkyd Industrial Gloss Enamel 800 – Safety Zone Yellow

Preferred Equipment

A. Architectural Finishes

1. Flooring: VCT – Armstrong
2. Cove Base
 - i. Terminal Building: Armstrong or Roppe
 - ii. Administration Building: Johnsonite Rubber 700 Series; 4” high; #24 Grey Haze
 - iii. Offices: Flexco Rubber wallflowers series; 4” high; #03 Charcoal
3. 4” Rubber Wall Base
 - i. Manufacturer: Roppe
 - ii. Color: 123 Charcoal
4. 3/8” Epoxy Terrazzo TZ-3
 - i. Manufacturer: Key Resin
 - ii. Color: KEY 100-1779 Gull Wing Grey
 - iii. Location: Concourse B
5. 3/8” Epoxy Terrazzo TZ-1
 - i. Manufacturer: Key Resin
 - ii. Color: KEY 001-563 White Diamond
 - iii. Location: Concourse B
6. 3/8” Epoxy Terrazzo TZ-2
 - i. Manufacturer: Key Resin
 - ii. Color: Key 28-27 Hearthstone
 - iii. Location: Concourse B
7. 3/8” Epoxy Terrazzo TZ-4
 - i. Manufacturer: Key Resin
 - ii. Color: KEY 100-675 Pewter
 - iii. Location: Concourse B
8. 3/8” Epoxy Terrazzo TZ-5
 - i. Manufacturer: Key Resin
 - ii. Color: KEY 100-2018 Whale Gray
 - iii. Location: Concourse B
9. 3/8” Epoxy Terrazzo TZ-6
 - i. Manufacturer: Key Resin

- ii. Color: KEY 001-563 White Diamond
 - iii. Location: Concourse B
10. 3/8" Epoxy Terrazzo TZ-7
- i. Manufacturer: Key Resin
 - ii. Color: KEY 001-754 Whiteish
 - iii. Location: Concourse A, B, & C Terminals
11. 3/8" Epoxy Terrazzo TZ-8
- i. Manufacturer: Key Resin
 - ii. Color: KEY 012 Black
 - iii. Location: Concourse B
12. 3/8" Epoxy Terrazzo TZ-9
- i. Manufacturer: Key Resin
 - ii. Color: KEY 001-753 White Glass
 - iii. Location: Concourse B
13. Accent Wall Tile T-1A
- i. Manufacturer: Fireclay
 - ii. Product: Glazed Wall Tile White Clay Body (3"X12")
 - iii. Color: White Wash (V1)
 - iv. Grout Color: Laticrete #89 Smoke Grey
 - v. Location: Concourse B
14. Accent Wall Tile T-1B
- i. Manufacturer: Fireclay
 - ii. Product: Glazed Wall Tile White Clay Body (3"X12")
 - iii. Color: Foggy Morning
 - iv. Grout Color: Laticrete #89 Smoke Grey
 - v. Location: Concourse B
15. Accent Wall Tile T-1C
- i. Manufacturer: Fireclay
 - ii. Product: Glazed Wall Tile White Clay Body (3"X12")
 - iii. Color: Powder Blue
 - iv. Grout Color: Laticrete #89 Smoke Grey
 - v. Location: Concourse B
16. Accent Wall Tile T-1D

- i. Manufacturer: Fireclay
 - ii. Product: Glazed Wall Tile White Clay Body (3”X12”)
 - iii. Color: Mayan Blue
 - iv. Grout Color: Laticrete #89 Smoke Grey
 - v. Location: Concourse B
17. Accent Wall Tile T-1E
- i. Manufacturer: Fireclay
 - ii. Product: Glazed Wall Tile White Clay Body (3”X12”)
 - iii. Color: Martinique
 - iv. Grout Color: Laticrete #89 Smoke Grey
 - v. Location: Concourse B
18. Porcelain Tile T-2 (restroom Floor)
- i. Manufacturer: Casalgrande Padana
 - ii. Product: Balsaltina 18”X18” Naturale Finish
 - iii. Color: Linosa
 - iv. Grout Color: Laticrete #45 Raven
 - v. Location: Concourse B
19. Ceiling Tile
- i. Armstrong 2’ x 2’, Cortega Angled Tegular 704A (2’ x 2’ x 5/8”)
 - ii. Armstrong 2’ x 2’, Fissured Square Lay-in 756A (2’ x 2’ x 5/8”)
 - iii. Armstrong 2’ x 4’, Cortega Second Look 2765 (2’ x 4’ x 3/4”)
 - iv. Armstrong 44”X 48”, Optima Techzone
 - v. Armstrong 2’ X 2’, Ultima
20. Ceiling Grid: Armstrong Prelude
- i. Mains: 7300
 - ii. 4’ Ts: XL7348
 - iii. 2’ Ts: XL7328
 - iv. Wall mold: 7800
21. Ceiling Grid: Armstrong Suprafine XL
- i. Location: Concourse B
22. Ceiling Metal Panel:
- i. Accent Ceilings & Walls
 - ii. Perforated Aluminum Acoustic Backing Torsion Spring Hinged Pans

- iii. Color: Ultra White
 - iv. Location: Concourse B
23. Ceiling Linear Metal
- i. Accent Ceilings & Walls
 - ii. Pattern: Barcode
 - iii. Color: 8424 Walnut
 - iv. Location: Concourse B
24. Carpet (Hold Rooms)
- i. Style Name: Resonance
 - ii. Style Number: J0118
 - iii. Color: 00406 Saddle
 - iv. Vendor: Continental Flooring (800-825-1221 Ext 206)
 - v. The pattern for the carpet is to run perpendicular to the concourse for hold room installations.
25. Carpet (Offices)
- i. Style Name: Live Wire
 - ii. Style Number: 54733
 - iii. Color: 33506 Animated
 - iv. Vendor: Continental Flooring (800-825-1221 Ext 206)
26. Carpet (MEM Executive Offices)
- i. Style Name: Ripple Effect
 - ii. Style Number: J0116
 - iii. Color: 00501 Laughs & Yawns
 - iv. Vendor: Continental Flooring (800-825-1221 Ext 206)
27. Carpet CPT-1 (Concourse B)
- i. Manufacturer: Interface
 - ii. Product: Custom Soundwave Verse Sample
 - iii. No: 265317-005
28. Carpet Tile CPT-1A (Concourse B)
- i. Manufacturer: Interface
 - ii. Product: Custom Groundwaves Verse Samples
 - iii. No: 265317-008
29. Carpet Tile CPT-1B (Concourse B)

- i. Manufacturer: Interface
 - ii. Product: Custom Off Line Sample
 - iii. No: 265317-007
- 30. Carpet Tile CPT-1 (Concourse B)
 - i. Manufacturer: Interface
 - ii. Product: Custom Off Line Sample
 - iii. No: 265317-002
- 31. Carpet Tile CPT-1D (Concourse B)
 - i. Manufacturer: Interface
 - ii. Product: Custom SL910 Sample
 - iii. No: 265317-013
- 32. Wood Paneling (Concourse B)
 - i. Strait Grain
 - ii. Species: White Oak
 - iii. Color: Custom
- 33. Quartz QZ-1 (Concourse B)
 - i. Manufacturer: Silestone
 - ii. Color: Blanco Maple
- 34. Quartz QZ-2 (Concourse B)
 - i. Manufacturer: Silestone
 - ii. Color: Cemento Spa. Polished Finish
- 35. Quartz QZ-3 (Concourse B)
 - i. Manufacturer: Cambria
 - ii. Color: Berwyn
- 36. Quartz QZ-4 (Concourse B)
 - i. Manufacturer: Cambria
 - ii. Color: Whitehall
- 37. Quartz QZ-5 (Concourse B)
 - i. Manufacturer: Silestone
 - ii. Color: Cemento Spa. Polished Finish
- 38. Quartz QZ-6 (Concourse B)
 - i. Manufacturer: Silestone
 - ii. Color: Whitehall

39. Quartz QZ-7 (Concourse B)
 - i. Manufacturer: Silestone
 - ii. Color: Whitehall
40. Curtain Wall (Concourse B)
 - i. Manufacturer: Kawneer
 - ii. Product: 1600 System 2
 - iii. Color: Interior Valspar Super Special White / Exterior Clear Anodized
41. Epoxy Flooring (Concourse B)
 - i. Manufacturer: BASF Building Systems
 - ii. Product: BASF Masterdeal 2500 LT Duty
 - iii. Color: Gray
42. Epoxy Flooring (Concourse B)
 - i. Manufacturer: Dex-O-Tex
 - ii. Product: Color Flake L
 - iii. Color: BX 520
43. Exterior Aluminum Composite Metal Paneling (Concourse B)
 - i. Manufacturer: Alucobond
 - ii. Product: Alucobond Plus – fire rated core
 - iii. Colors:
 1. Type 1: Titanium Metallic II
 2. Type 3A: Southwest Gold Metallic
 3. Type 3B: Harvest Gold Mica
 4. Type 3C: Driftwood Mica

B. Plumbing & Restrooms

1. Flush valves: Sloan, Royal
2. Electronic flush valve retrofits:
 - i. Urinals: Zurn ZRK-C-3.5, 3.5 GPF
 - ii. Water Closets: Zurn ZRK-C-3.5, 3.5 GPF
3. Plumbing fixtures: Crane, American Standard, Kohler
4. Partitions: Accurate, Stainless Steel, No sight design, overhead braced, Continuous, Hinge type-Integral, Hinge In-swing/out-swing standard closed position, Floor mounted
5. Sinks: American Standard, 0355.012 Lucerne wall mounted Lav. sink w/4" centers

6. Service Sinks: 8” centers w/ ZURN Z841M1 Faucet
7. Urinals: 6501.010 wash brook urinal American Standard white. Zurn Retro Flush Valve.
8. Water Closets
 - i. Wall-mounted: American Standard 2257.103 af wall toilet 4 bolt wall mount, white
 - ii. Floor-mounted: Kohler K-4368
9. Lavatories
 - i. Non-ADA: American Standard, vandal resistant lavatory faucet with grid drain 2385.130 polished chrome
 - ii. ADA: Delta – 511-WFHDF
10. Faucets: Sloan Optima EBF-85M infrared
11. Water closet gaskets: Wade Part # M-8 for wall hung closets
12. Backflow devices: Watts
13. Water coolers: Halsey Taylor – model #HAC8FS-Q(SS) wall-mounted
14. Toilet Accessories: Bobrick
 - i. Recessed towel dispenser and waste receptacle: B-3961
 - ii. Surface mounted toilet tissue dispenser: B-2888
 - iii. Sanitary napkin disposal: B-270
 - iv. Heavy duty robe hook: B-2116
 - v. Handicap tilt mirror: B-293 (24” x 36”)
 - vi. Grab bars: stainless steel with Snap Flange
15. Toilet Accessories: Non-Bobrick
 - i. Foam Dispenser – Spartan Chemical Company 975700
 - ii. Toilet paper dispenser: Shoreline 830 from Memphis Chemical (not for use in public restrooms)
 - iii. Toilet Seat Cover Cabinet: Franklin Brass #1988 (Stainless Steel)
16. Eye Wash Station: Bradley S19314F
17. Angle Stops: Brasscraft

C. Doors

1. Exterior: Steelcraft Door; 16 gauge metal, galvanized; fully reinforced for door closer and continuous gear hinge; with 24” x 32” window prep (if specified)
 - a. Standard doors shall be 3.0’ x 7.0’.
 - b. Jet Bridge doors shall be 4.0’ x 7.0’.
2. Interior: 3070 (3.0’ x 7.0’) solid core wooden door with prep for continuous gear hinge; with 24” x 32” window prep (if specified)

3. Window Kits (if specified): Anemostat #LOPRO Visionlite 24"x32" with Tempered Glass
4. Metal Frames: Fit door openings to frame for a Steelcraft door or solid core wooden door with fully reinforced frame for door closer and continuous gear hinge
5. Threshold: Aluminum to fit door frame
6. Drip Caps: 16 ad if outside door
7. Closers:
 - a. Standard Doors: LCN model 4041, arm RW/ PA, finish to match existing areas adjustment size 1-6 PC 23
 - b. Jet Bridge Doors: Dorma 1816HT Series with smoke detector
8. Hinges:
 - a. New doors shall have reinforcement on the hinge side and hinges shall be continuous geared hinges by National Guard Products, Stanley, or PBB. Minimum 0.120-inch thick hinge leaves with minimum overall width of 4 inches; fabricated to full height of door and frame. Fabricate hinges non-handed and to template screw locations. Continuous hinges guaranteed for the life of the opening.
 1. At electrified hardware locations provide electric transfer continuous hinges with a 12" removable hinge modification accessible without de-mounting door from the frame and Molex standardized plug connectors to accommodate up to 12 wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Preferred hardware is Von Duprin EPT10.
 - b. Existing doors without reinforcement on the hinge side shall use hinges by Stanley FBB 179-4.5 x 4.5 x USP x NRP
9. Lock Prep: Yale 6-pin lockset-PB5407LN 694X497 Finish – US 10B
10. Keyways: 6-pin LFIC Cores with SA keyway
11. Panic Hardware: Dorma 9000 Series or Von Duprin RX QEL 98NL-F
12. Flush Bolts: Trimco, Burns, or Ives. Provide manual flush bolts with top rod of sufficient length to allow bolt location approximately six feet from the floor. Furnish dust proof strikes for bottom bolts. Surface bolts to be 8" in length and U.L. listed for labeled fire doors.
13. Low voltage door operators: Dorma ED900 Series or LCN 9000 Series

D. Electrical

1. Wire: THHN or equal for insulation
2. VFDs: PowerFlex 400 by Allen-Bradley including latest harmonic distortion units w/ Metasys board
3. High Voltage Substations: General Electrical, Cutler Hammer
4. Panels, breakers, and contactors: Westinghouse, ITE (Siemens), Square D, Allen Bradley,

Cutler Hammer

5. Devices: Leviton, Bryant, P&S, Hubbell
6. Device Covers: Stainless Steel
7. Lighting: G.E, Phillips, Sylvania, Lithonia
8. Fittings (no Set screws, couplings, or connectors): Raco, Steel City
9. Conduit/Wire: No MC or BX cable other than 6' or less to be used as whips from junction box to item being fed

E. Mechanical

1. Heaters: Trane, McQuay
2. Electronic Controls: Johnson Controls (FEC, NAE, BACnet MS/TP), Barber Coleman, Trane, McQuay
3. Valves, Hot/Chill Water: Johnson Controls, Barber Coleman, Honeywell
4. AHUs: Trane
5. Boilers: Cleaver Brooks
6. Chillers: Trane
7. Pumps: Peerless, Bell & Gossett, Aurora, Ingersoll Rand, Pyramid Pump, Grundfos
8. VAV Boxes (All VAVs shall be pressure dependent with electronic controls): Environmental Tech, Varitrane Systems, Tuttle & Bailey
9. Electronic Thermostats: TE-6700, BACnet MS/TP, N2, Johnson Control
10. Cooling Towers: Marley, BAC

F. Miscellaneous

1. Joint Seals and Floor Penetration Seals: Evazote 380 E. S. P. with Hindered Amine Light Stabilizer
2. Automatic Perimeter Fence Gate Operators: HySecurity