

**CONTRACT DOCUMENTS AND SPECIFICATIONS
for
AIRPORT IMPROVEMENTS**

**AT
COOK COUNTY AIRPORT
Adel, Georgia**

GDOT #APXXX-XXXX-XX(XXX) Cook County

CDM SMITH PROJECT # 217808

**CRACK SEAL AND REMARK
RUNWAYS 5-23, 15-33, AND
TAXIWAYS**

December 2017



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**COOK COUNTY AIRPORT
CRACK SEAL AND REMARK RUNWAYS 5-23, 15-33, AND TAXIWAYS**

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It is necessary for the successful bidder to have a thorough working knowledge of the technical specifications listed in the: FAA Advisory Circular 150/5370-10G – Standards for Specifying Construction of Airports. This project will be built to those FAA specifications as listed below. Certain FAA specifications have been amended for this project and those amendments are included in these documents for your review.	
 FAA Specifications:	
M-101	Mobilization M-101-1 to 2
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**COOK COUNTY AIRPORT
Adel, Georgia
INSTRUCTIONS TO BIDDERS**

PROJECT NAME: **“Crack Seal and Remark Runways 5-23, 15-33, and Taxiways”**
BID DATE: **October 18, 2017**
BID DEADLINE: **11:00 a.m.**
BID NUMBER: **GDOT APXXX-XXXX-XX(XXX) Cook County**

General Information:

This project consists of asphalt crack sealing and remarking of Runways 5-23, 15-33, and taxiways at the Cook County Airport, Adel, Georgia.

The contract time for this project has been set at **60** calendar days.

Complete examination and understanding of the drawings and specifications is necessary in order for the Bidder to properly submit a bid. Bid documents may be obtained, at no cost, in electronic format from:

Mr. Jeff Vickery, PE
CDM Smith
3200 Windy Hill Road
Suite 210 West
Atlanta, Georgia, 30339
Office: (404) 720-1243
Email: VickeryJ@cdmsmith.com

It shall be the responsibility of the Bidder to print physical copies of the drawings and specifications.

Bids shall be delivered by mail, courier, or in person to Cook County at the offices of:

Ms. Faye Hughes, County Administrator
Cook County
1200 S. Hutchinson Avenue
Adel, GA 31620

If a bid is to be delivered by mail or courier, it is the responsibility of the Bidder to see that the bid arrives prior to the bid deadline. **Bids will be publicly opened and read aloud starting at 11:15 a.m., on October 18, 2017. Any bids received after 11:00 a.m. on the date specified will not be considered and will be returned to the bidder unopened.** Bids transmitted by facsimile are non-responsive and will not be considered.

Questions regarding the bid or bid documents should be directed **in writing** to:

Mr. Jeff Vickery, PE
CDM Smith
3200 Windy Hill Road
Suite 210 West
Atlanta, Georgia, 30339
Office: (404) 720-1243
Email: VickeryJ@cdmsmith.com

Questions must be received **in writing (letter, email, or fax) at least ten (10) calendar days prior to the Bid Date**. Questions received after that date will not be answered prior to bid opening. Any responses to inquiries or interpretation of the bid documents will be made only by Addendum issued by the Engineer. A copy of such addendum will be mailed or delivered to each person receiving a set of bid documents. The Owner will not be responsible for any other explanation or interpretation of the bid documents made or given prior to the award of the contract.

Time is of the essence in the completion of this project and there will be, on the part of the Owner, substantial monetary damage in the event that the Contractor should fail to complete the work within the time fixed for completion in the Contract, or within the time to which such completion may have been extended.

Liquidated Damages in the amount of **Five Hundred dollars (\$500.00)** will be deducted and retained out of the monies which may become due the Contractor for every day that the time of work exceeds 60 **calendar days**, or as may be extended beyond 60 calendar days by mutual agreement as provided in these Contract Documents.

If you wish to submit a bid, please review and complete the following list of Instructions to Bidders.

Instructions to Bidders:

1. Bids must be submitted on the original or on exact reproductions of the bid forms supplied, including any addenda which may be issued, in a sealed envelope plainly marked with: Bidder's name, address, telephone number, bidder's e-mail address (if available), contact person, and in a conspicuous place: **"Crack Seal and Remark Runways 5-23, 15-33, and Taxiways"**. Bidders shall submit a unit price for each item for which a unit price is requested. Lump Sum prices will be provided only for single unit items where specified. Bids must be completed and signed in the space provided on the bid form, by a representative of the Bidder legally authorized to obligate the Bidder regarding said bid, or the bid will not be considered.
2. The unit price shall be inserted on the proposal sheet in the "UNIT PRICE" column. Extensions, which are the unit prices multiplied by the approximate quantities shown for each item, shall be inserted in figures in the "EXTENDED TOTAL" column. Bids not so made will not be considered. Conditional bids or unbalanced bids will not be considered. In case of ambiguity or lack of clarity in stating prices in the proposal, the Owner reserves the right to adopt the most advantageous construction thereof.
3. Bidders are required to submit the proposal forms shown in the bid documents to the Owner accompanied by a cashier's check or a Bid Bond, made out to Cook County, Georgia in the amount of five percent (5%) of the sum of the Total Bid Price as a guarantee that the Bidder, if awarded the Contract, will within thirty (30) days after written notice of such award, enter into a written contract with said Owner in accordance with the conditions of the proposal, plans and specifications.

Additionally, upon the award of a bid, the successful Contractor shall provide a Performance Bond guaranteeing the faithful performance of the contract, and a Payment Bond guaranteeing the payment of all persons supplying labor or furnishing materials for the project, both in a form satisfactory to the Owner

and issued by a surety authorized to do business in the State of Georgia. Each bond shall be equal to or greater than the Total Contract Price.

No bid may be withdrawn after the scheduled bid closing time for a period of one hundred twenty (120) calendar days. Bidders are specifically cautioned that if the above required documents are not included, his bid will be considered as non-responsive and the envelope containing his proposal will be returned. Bidder also agrees to commence work on the project within ten (10) days after receiving a "Notice to Proceed", issued by the Owner. It is anticipated that a "Notice to Proceed" will be issued on or about November 13, 2017.

4. Each Bidder is individually responsible for the careful examination of the site of the proposed project to inform themselves of all conditions that might affect the execution of the work to be performed, as well as the bid documents that include: Instruction to Bidders; Proposal forms; Contract forms; General Provisions; Special Provisions; Plans; the Georgia Department of Transportation's "Standard Specifications for Construction of Transportation Systems", 2013 Edition; and Supplemental Specifications, 2013 Edition; FAA technical specifications from Standards for Specifying Construction of Airports Advisory Circular 150/5370-10, latest edition; FAA technical specifications from Standards for Airport Markings Advisory Circular 150/5340-1, latest edition; or other requirements of the project as may be issued by the Owner. The failure or omission by any Bidder to do so shall in no way relieve said Bidder from any obligation with respect to its bid.

The filing of the "Proposal" shall constitute an admission by the bidder that he has carried out the foregoing stipulations to his entire satisfaction. Quantities included in the plans and proposal are estimated and are to be regarded as approximate only. The Owner reserves the right to vary the quantities of work to be accomplished, or as the Owner may deem to be in its own best interest, to construct all or any part of, or to delete all or any part of any item of work described.

5. The Owner reserves the right to waive formalities, to reject any or all bids, or to re-advertise for bids as may be in the best interest of the Owner. Award of bid, if made, will be to the most responsive and qualified Bidder whose bid is most advantageous to the Owner, price and other factors considered.

The Owner specifically reserves the right to take the Bidder's past performance with the Owner and others into consideration in determining whether the Bidder and its bids are responsive and qualified and most advantageous to the Owner. All decisions regarding award of the Contract will be made by the

- Owner at an open public meeting in accordance with the requirements of Georgia Statutes, and all interested parties are invited to attend.
6. Bidder shall provide the Owner with evidentiary documentation that Bidder has met the insurance requirements as specified in Paragraph 13 of the Contract Agreement included in these contract documents.
 7. This project requires that not less than the general prevailing wage rate for work of similar character in this locality shall be paid for all laborers, workmen, and mechanics employed in the construction thereof, as more fully described in Section 130 of the General Provisions.
 8. The cost of any City, County, or State sales taxes shall be included in the bid proposal.
 9. The successful Bidder (Contractor) shall be responsible for a Quality Control Program as described in Section 100 of the General Provisions. Quality Assurance inspections and testing will be conducted by the Engineer or the Georgia Department of Transportation. However, the cost of any re-tests necessitated by test failures shall be charged to the Contractor. Additionally, the Contractor shall be required to provide his own construction staking.
 10. The requirements of 49CFR Part 26, Regulations of the U. S. Department Transportation, apply to this contract. It is the policy of the Owner to practice non-discrimination based on race, color, sex or national origin in the award of performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids. Award of this Contract will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders including those who qualify as a DBE. A DBE contract goal of 10.0% has been established for this contract.
 11. In accordance with Title VII of the Civil Rights Act of 1964, as amended, all Bidders will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, sex, or national origin in consideration for award.

END OF INSTRUCTIONS TO BIDDERS

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PROPOSAL

Ms. Faye Hughes, County Administrator
Cook County
1200 S. Hutchinson Avenue
Adel, GA 31620

RE: "Crack Seal and Remark Runways 5-23, 15-33, and Taxiways"
GDOT # APXXX-XXXX-XX(XXX) Cook County
CDM Smith # 217808

Dear Ms. Hughes:

In compliance with your Invitation to Bid for the construction referenced above, having examined the plans and specifications with related documents and having examined the site of the proposed work, and being familiar with all the conditions surrounding the construction of the proposed project, including the availability of materials, and labor, the undersigned hereby proposes to furnish all labor, materials and supplies and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the unit prices stated herein. This Total Contract Price is bid to cover all expenses incurred in performing the work required under the Contract Documents, of which this Proposal is a part.

It is understood that all workmanship and materials under all items of work are guaranteed for one (1) year from the date of final acceptance, unless otherwise specified.

It is also understood that the Owner reserves the right to accept or reject any or all bids and to waive formalities. The Owner also reserves the right to eliminate any item from the proposed project. The Total Contract Price amount for the items listed under Project Description and Bid Items is understood to include all applicable taxes, overhead, profit, contingencies, etc. necessary for a complete job.

Enclosed is security as required, consisting of cash, certified check or Bid Bond for the Sum of _____ dollars (\$ _____), made payable to the **Cook County**, in the amount of 5% of the bid.

(Signature Page Follows)

Respectfully Submitted,

BY: _____

TITLE: _____

COMPANY: _____

ADDRESS: _____

SWORN before me

this ____ day of _____, 2017

Notary Public

My Commission Expires:

(Seal if by Corporation)

(Notary Seal)

AFFIDAVIT OF NON-COLLUSION

STATE OF GEORGIA

COUNTY OF COOK

Personally appeared before me, _____, who being first duly sworn says that he is a member of the firm of: _____ and further says that his firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submission of a bid on the above-name project.

Further, _____ swears and affirms that all legal formalities required for the proper execution of affidavits pursuant to the laws of his state have been complied with and further agrees, on behalf of himself, his firm, association, or corporation, that in any subsequent prosecution for perjury of himself, his firm, association, or corporation, it shall not be a defense to such charge of perjury that said formalities were not in fact complied with.

Legal Signature

SWORN before me this _____ day of _____, 2017

Notary Public

My Commission Expires:

(Notary Seal)

ACKNOWLEDGMENT OF ADDENDA

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

Addendum No. _____ Signature _____ Date _____

PRE-QUALIFICATION OF BIDDERS

Before submitting a bid in excess of \$500,000, the Bidder shall have been pre-qualified with the Georgia Department of Transportation and received a “Certificate of Qualification” in accordance with the Rules and Regulations approved and adopted by the State Transportation Board. Bidders submitting bids of \$500,000 or less may be exempt from prequalification requirements. In addition, the aggregate total amount a non-pre-qualified Bidder may have under contract shall not exceed \$4,000,000.

Bidders intending to consistently submit Proposals shall pre-qualify at least once a year. However, qualifications may be changed during that period upon the submission of additional favorable reports or upon unsatisfactory performance. In addition, the GDOT or OWNER reserves the right at any time to require the Contractor to furnish a current financial and experience statement.

CERTIFICATE OF CURRENT CAPACITY and STATUS OF CONTRACTS ON HAND

The apparent winning Bidder for this project shall submit an executed “Certificate of Current Capacity” and a “Status of Contracts on Hand” (as described in Section 102 of the GDOT Standard Specifications) within 30 calendar days following the Bid Opening, or at the time of execution of the Contract, whichever shall occur first. Failure to provide these documents may result in disqualification of the Bidder and the Contract may or may not be awarded to another bidder as may be in the best interest of the Owner.

**Cook County Airport
Adel, Georgia
Crack Seal and Remark Runways 5-23, 15-33, and Taxiways
December 2017**

CRACK SEAL AND REMARK RUNWAY 5-23 AND TAXIWAYS						
Item No.	Spec. No.	Item	Unit	Quantity	Unit Price	Total
1	M-101	Mobilization	LS	1		
2	P-101	Paint and Rubber Removal	SF	10,355		
3	P-605	Crack Sealing	LF	58,000		
4	P-620	Runway and Taxiway Marking, Type II, White, incl. Type III Glass Beads and Microbicide	SF	34,795		
5	P-620	Runway and Taxiway Marking, Type II, Yellow, incl. Type III Glass Beads and Microbicide	SF	5,675		
6	P-620	Runway and Taxiway Marking, Type II, Black, incl. Microbicide	SF	17,310		
Subtotal for Crack Seal and Remarking Runway 5-23						

CRACK SEAL AND REMARK RUNWAY 15-33						
Item No.	Spec. No.	Item	Unit	Quantity	Unit Price	Total
1	M-101	Mobilization	LS	1		
2	P-101	Crack Sealing	LF	31,000		
3	P-620	Runway and Taxiway Marking, Type II, White, incl. Type III Glass Beads and Microbicide	SF	29,705		
4	P-620	Runway and Taxiway Marking, Type II, Black, incl. Microbicide	SF	11,775		
Subtotal for Crack Seal and Remarking Runway 15-33						

Grand Total for Crack Seal and Remark Runways 5-23, 15-33, and Taxiways						
--	--	--	--	--	--	--

Bidder hereby agrees to furnish all labor, materials, equipment, and services for the Project in accordance with the Plans, Specifications, and all addenda, for the Total Contract Price listed above.

Written in Words: _____

Clauses to be included in all Solicitations, Contracts, and Subcontracts Resulting from Projects

Funded Under the AIP

Procurements made under the AIP must comply with required Federal provisions established by various laws and statutes.

Certifications included for signature:

Certification of Non-Segregated Facilities, Executive Order 11246, 41 CFR 60 -1.8

DBE Requirements, 49 CFR Part 26

Buy American Act, Title 49 USC, Chapter 501

Drug-free Workplace

Trade Restriction Clause, 49 CFR 30.13

Equal Employment Opportunity, Executive Order 11246, 41 CFR 60-4.3

Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion, 49 CFR 29

Laws and Statutes herein incorporated with this contract by reference:

Notice of Requirement for Affirmative Action, Executive Order 11246, 41 CFR 60-4

Veteran's Preference, Title 49 USC 47112

Civil Rights Act of 1964, Title VI, 49 CFR 21

Airport and Airway Improvement Act of 1982, Section 520

Lobbying and Influencing Federal Employees, 49 CFR 20

Access to Records and Reports, 49 CFR 18.36

Energy Conservation, 49 CFR 18.36

Breach of Contract Terms, 49 CFR 18.36

Rights to Inventions, 49 CFR 18.36

Termination of Contract, 49 CFR 18.36

Contract Workhours and Safety Standards Act Requirements, 29 CFR 5 (Contracts over \$100,000)

Clean Air and Water Pollution Control, 49 CFR 18.36(i)(12) (Contracts over \$100,000)

CERTIFICATION OF NON-SEGREGATED FACILITIES

Certification to be submitted by Federally Assisted Construction Contractors of Applicants and their Subcontractors (Applicable to Federally Assisted Construction Contracts and Related Subcontracts Exceeding \$10,000.00 which are not exempt from the Equal Opportunity Clause)

Certification of Non-segregated Facilities.

The federally-assisted construction contractor certifies that he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor certifies that he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractors agree that a breach of this certification is a violation of the equal opportunity clause in this contract. As used in this certification, the term segregated facilities means any waiting rooms, work areas, rest rooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time period) he will obtain identical certifications from proposed subcontractors prior to the award of sub contracts exceeding \$10,000 which are not exempt from the provisions of the equal opportunity clause and that he will retain such certifications in his files.

Signature of Contractor

Title

DBE REQUIREMENTS

The requirements of 49CFR Part 26, Regulations of the U. S. Department Transportation, apply to this contract. It is the policy of Cook County, Georgia to practice non-discrimination based on race, color, sex or national origin in the award of performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids. Award of this Contract will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders including those who qualify as a DBE. A DBE contract goal of **10.0%** has been established for this contract. The bidder shall make good faith efforts, as defined in Appendix A, 49 CFR Part 26, to meet the contract goal for the DBE participation in the performance of this contract. The bidder will be required to submit the following information:

1. The name and address of DBE firms that will participate in the contract;
2. A description of work that each DBE will perform;
3. The dollar amount of the participation of each DBE firm;
4. Written and signed documentation of the bidder's commitment to use a DBE subcontractor whose participation it submits to meet the contract goals;
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the bidder's commitment.
6. If the bidder fails to meet the contract goal, evidence of good faith efforts, as described in Appendix A shall be made.

The bidder shall submit the information with its bid as a condition of responsiveness.

A bidder who fails to meet these requirements and who cannot show good faith effort will be considered non-responsive.

DBE participation in this contract may be in the form of a prime contract, subcontract, joint venture, or another arrangement that qualifies under 49 CFR #26.55, "How is a DBE participation counted toward goals?" or #26.53(g).

Contractor should note that in accordance with federal regulations, if materials or supplies are purchased from a DBE manufacturer, 100 percent of the cost of materials or supplies may count toward DBE goals. If materials or supplies are purchased from a DBE regular dealer, **only 60 percent** of the cost of materials

or supplies may count toward DBE goals. DBE regular dealers are defined under 49 CFR 26.55 (e)(2)(ii).

Packagers, brokers, manufacturer's representatives, or other persons who arrange or expedite transactions are not considered regular dealers and therefore the cost of materials and supplies provided through a non-regular dealer are not to be counted towards DBE goals. Fees, commissions, charges for assistance of procurement of materials and supplies, fees, or transportation charges for delivery of materials may be counted towards DBE goals provided it is determined and documented that these fees are reasonable and not excessive as compared to fees for similar services.

Contractor is responsible for ascertaining the status of his/her DBE contractors and subcontractors prior to committing to use him/her on a project.

**CERTIFICATION OF CONTRACTOR TO COMPLY
WITH DBE REQUIREMENTS**

Having examined these Contract Documents and understanding the requirements contained herein, I a duly authorized representative of assure that within three (3) days after being tentatively awarded the Contract for this work, there will be furnished documentation to the Owner that the herein before stated DBE contract goals will be met.

This documentation shall consist of a minimum: the Subcontractors name, address and telephone number; his Contract responsibility (type of work); his dollar volume of work to be performed; and the percentage that his work is of the total bid amount. The DBE goal for this project is 10.0 percent. In lieu of meeting the DBE goals, I understand that documentation can be presented and my bid still be considered responsive. Such documentation shall include but not be limited to the following measures:

- Whether the apparent successful bidder attended any pre-solicitation or pre-bid meetings that were scheduled by the Owner to inform DBE's of contracting and subcontracting opportunities;
- Whether the apparent successful bidder advertised in general circulation, trade association, and disadvantaged business media concerning the subcontracting opportunities;
- Whether the apparent successful bidder provided written notice to a reasonable number of specific DBE's that their interest in the contract was being solicited in sufficient time to allow the DBE's to participate effectively;
- Whether the apparent successful bidder followed up initial solicitations of interest by contacting DBE's to determine with certainty whether the DBE's were interested;
- Whether the apparent successful bidder selected portions of the work to be performed by DBE's in order to increase the likelihood of meeting the DBE goals (including, where appropriate, breaking down contracts into economically feasible units to facilitate DBE participation);
- Whether the apparent successful bidder provided interested DBE's with adequate information about the plans, specifications and requirements of the contract;

- Whether the apparent successful bidder negotiated in good faith with interested DBE's, not rejecting the DBE's as unqualified without sound reasons based on a thorough investigation of their capabilities;
- Whether the apparent successful bidder made efforts to assist interested DBE's in obtaining bonding, lines of credit, or insurance required by the Owner or his own requirements; and,
- Whether the apparent successful bidder effectively used the services of the available disadvantaged business community organizations; disadvantaged Contractor's groups; local, state and federal disadvantaged business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBE's.

Respectfully Submitted,

BY: _____

TITLE: _____ (Seal if Corporation)

ADDRESS: _____

DATE: _____

FORM 1: DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The undersigned bidder/offeror has satisfied the requirements of the bid specification in the following manner (please check the appropriate space):

_____ The bidder/offeror is committed to a minimum of _____ % DBE utilization on this contract.

_____ The bidder/offeror (if unable to meet the DBE goal of _____%) is committed to a minimum of _____% DBE utilization on this contract and has submitted documentation demonstrating good faith efforts.

Name of bidder/offeror's firm: _____

State Registration No. _____

By _____
(Signature) Title

FORM 2: LETTER OF INTENT

Name of bidder/offeror's firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Name of DBE firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Description of work to be performed by DBE firm:

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above.

The estimated dollar value of this work is \$ _____.

Affirmation

The above-named DBE firm affirms that it **is a certified DBE firm with the state of Georgia**. The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By _____
(Signature) (Title)

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

(Submit this page for each DBE subcontractor.)

Buy American Act Certificate (Feb 2009)

(a) The offeror certifies that each end product, except those listed in paragraph (b) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, *i.e.*, an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of “domestic end product.” The terms “commercially available off-the-shelf (COTS) item,” “component,” “domestic end product,” “end product,” “foreign end product,” and “United States” are defined in the clause of Federal Acquisition Regulations entitled “52.225-1 Buy American Act—Supplies.”

(b) Foreign End Products:

Line Item No.	Country of Origin
_____	_____
_____	_____
_____	_____

Signature of Contractor

Date

Title

DRUG-FREE WORKPLACE

For: _____

The undersigned, an officer of the Proposer, certifies that a drug-free workplace will be provided for its employees and employees of subcontractors during the performance of the above referenced contract as stated in Title 50 amended to include Chapter 24, the Drug Free Workplace Act 1255.

I certify that employees working in accordance with the above referenced contract have been notified that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the workplace for the duration of the contract period, and of the penalties/actions that will be taken against them for violations of such prohibition.

I understand that under section 50-24-5, suspension, termination, or debarment will result from false certification and the failure to carry out the requirements of Code Section 50-24-3.

This ____ day of _____, 2017

Signature_____

Printed name_____

Title_____

Company_____

Attest:

Signature_____

Printed name _____

Title_____

Company_____

TRADE RESTRICTION CLAUSE

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

- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
- c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

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

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

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

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the

contract or subcontract for default at no cost to the Government.

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

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

Signature of Contractor

Title

EQUAL EMPLOYMENT OPPORTUNITY - 41 CFR PART 60-1.4(b)

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

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
3. The contractor will send to each labor union or representative of workers with which s/he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for

further Government contracts or federally assisted construction contracts in accordance with procedure authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

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

Signature of Contractor

Title

GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT

Contract No. and Name: GDOT #AP XXX-XXXX-XX(XXX) Cook County, CDM Smith #217808

Contractor's Name: _____

**STATE OF GEORGIA
CONTRACTOR AFFIDAVIT**

By executing this affidavit, the undersigned Contractor verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with **Cook County** has registered with and is participating in a federal work authorization program*, in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91. The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with **Cook County**, the Contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. The Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to **Cook County** at the time the subcontractor(s) is retained to perform such service.

EEV / E-Verify™ User Identification Number

Date of Authorization

BY: Authorized Officer or Agent
(Contractor Name)

Date

Title of Authorized Officer or Agent of Contractor

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 201_

Printed Name of Authorized Officer or Agent

[NOTARY SEAL]
Notary Public
My Commission Expires: _____

*any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND
VOLUNTARY EXCLUSION**

The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offeror/contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

Signature of Contractor

Title

Bidder's List Questionnaire
All firms bidding or quoting on sub-contracts for this
DOT- assisted project are listed below.

<u>Firm Name/Age of Firm</u>	<u>Address</u>	<u>Certified DBE (Y or N)/Certifying Agency</u>	Annual Gross Receipts (Check One)				
			Less than \$500,000	\$500,000- \$1,000,000	\$1,000,000 0- \$5,000,000	\$5,000,000- \$10,000,000	Greater than \$10,000,000

END OF PROPOSAL SECTION

THIS SHEET INTENTIONALLY LEFT BLANK

CONTRACT AGREEMENT

THIS AGREEMENT, made and entered into this ____ day of _____ 2017, by and between Cook County, hereinafter called the **Owner** and _____, hereinafter called the **Contractor**.

WITNESSETH. For the construction of work to be performed and for the consideration hereinafter fully described, the Contractor and the Owner agree as follows:

1. Scope of Work. The Contractor shall furnish and deliver all materials and perform all work in the manner and form as provided in the following listed plans, specifications and contract documents, which are hereby made a part thereof. This project consists of crack sealing and remarking Runways 5-23, 15-33, and taxiways at the Cook County Airport, Adel, Georgia.

It is understood by the parties that a good faith effort has been made to estimate the amount of work and materials needed to complete the project, but actual amounts may vary by as much as 25%, up or down, without the need to re-bid or amend the Contract, except as provided herein in these specifications and contract documents.

SPECIFICATIONS AND CONTRACT DOCUMENTS

- a. Instruction to Bidders
- b. Proposal
- c. Contract (this Document)
- d. General Provisions
- e. Special Provisions
- f. Technical Specifications
- g. Plans

2. Time of Completion. The Contractor shall commence work within 10 calendar days from the date the Owner issues a "Notice to Proceed." All services to be rendered by the Contractor, as specified in these

Contract Documents, shall be completed within **60** calendar days after start of construction, but in no case more than 70 days after the Owner has issued a Notice to Proceed. It is anticipated that a “**Notice to Proceed**” will be issued on or about **November 13, 2017**. Should the time of completion of this Contract be extended for any reason, such extension shall not affect the validity of the Contract, nor the liability of the Surety upon the bond herein referred to.

3. **Fee for Service.** In consideration of the performance of the Contract, the Owner agrees to pay the Contractor in current funds, as compensation for his service, fees based on the actual work performed per the unit price schedule as stated in the Proposal of the Contractor, and per these Contract Documents. Fees shall be paid monthly on the basis of work completed, less ten (10) percent of the total price thereof, to be held as retainage until all work has been completed in a satisfactory manner and a final payment has been authorized by the Owner.
4. **Applications for Payment.** The Contractor shall apply for payment under this Contract in accordance with the GDOT Standard Specifications.
5. **Certificates of Payment.** The Engineer shall check the Contractor's statement of monies due under this Contract, and shall promptly compute and issue certificates to the Owner for all such as he approves, which certificates shall be payable on issuance.
6. **Lien Waivers.** Neither the final payment nor any part of the retained percentage shall become due until the Contractor delivers to the Owner a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof, and if required in either case, an affidavit that so far as he has knowledge or information, the releases and receipts supplied include all of the labor and materials for which a lien could be filed.

The Contractor may, if any sub-contractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Engineer, to indemnify the Owner against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such a lien, including all costs and reasonable attorney's fees.

7. **Acceptance and Final Payment.** Upon submission by the Contractor of evidence satisfactory to the Owner that the requirements stated in Paragraph 6. above have been satisfied, and all work covered by

this Contract, as may have been amended, has been accepted by the Owner, final payment, including all monies held as retainage shall be made within thirty (30) days after receipt of a final invoice from the Contractor.

- 8. Liquidated Damages.** Time is of the essence in the completion of this project and there will be, on the part of the Owner, substantial monetary damage in the event that the Contractor should fail to complete the work within the time fixed for completion in the Contract, or within the time to which such completion may have been extended. The amount listed below is substituted for the schedule of Liquidated Damages outlined in Section 108.08 of the GDOT's Standard Specifications for Construction of Transportation Systems, and is hereby made a part of these Contract Documents.

Liquidated Damages in the amount of **Five Hundred Dollars (\$500.00)** will be deducted and retained out of the monies which may become due the Contractor for every day that the time of work exceeds **60 calendar days**, or as may be extended beyond 60 calendar days by mutual agreement as provided in these Contract Documents. Under no circumstances shall the airport be closed for more than **30 calendar days**.

- 9. Responsibility of Contractor.** The Contractor shall be held responsible for any failure to adhere to and comply with all local ordinances and laws controlling in any way the actions of those engaged upon the work, or affecting any materials, transportation or disposition of same, and the Contractor agrees to assume all liability for and to indemnify the Owner against any losses, costs, damages and liabilities that may arise by reason of any liens, claims, or demands for either materials purchased or for work performed by laborers, mechanics and others and from any damages, claims, costs, actions, or causes of action and judgment that may arise from personal injuries or property damages sustained by mechanics, laborers or any person or persons by reason of accidents or otherwise, occurring through the neglect of carelessness of the Contractor, his agents, employees or workmen and any subcontractor and from damages to the public, injury of any person, corporation, etc., including any cost of defense sustained in depositing materials provided that the Contractor shall be notified of the bringing of suits in such cases and be permitted to defend same by his own counsel. The Contractor and his Surety and Sureties shall save harmless the Owner from all liabilities, claims, judgments, costs and expenses which may in any manner arise against the Owner in consequence of the granting of this Contract, or which in any way may result from the carelessness or neglect of the Contractor, his agents, servants, or employees, and any sub-contractor. The Contractor is responsible for notifying the FAA of the closure of the airport for

construction (FAA form 7460-2) prior to start of work.

- 10. Performance and Payment Bonds.** The Contractor has entered into and herewith tenders and presents bonds of even date in the sum of _____ Dollars (\$ _____), including a Performance Bond guaranteeing the faithful performance of the contract, and a Payment Bond guaranteeing the payment of all persons supplying labor or furnishing materials for the project, both in a form satisfactory to the Owner. Each bond shall be equal to or greater than the Total Contract Price. Said Bonds are attached and made a part hereto of this Contract Agreement.
- 11. Performance and Payment Bond Surety:** It is further mutually agreed between the Contractor and Owner that, if at any time after the execution of this Contract and the Performance and Payment Bonds hereto attached for his faithful performance, the Owner shall deem the Surety or Sureties upon such Bond to be unsatisfactory; or if for any reason such Bond ceases to be adequate to cover the performance of the work, the Contractor shall, at his expense, within five (5) days after the receipt of notice from the Owner to do so, furnish an additional Bond or Bonds in such form and amount, and with such Surety or Sureties that shall be satisfactory to the Owner. In such event, no further payment to the Contractor shall be deemed to be due under the Contract until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the Owner.
- 12. Guarantee.** It is understood that the Contractor guarantees all material and workmanship for a period of one (1) year dating from the date of final acceptance of the Contract.
- 13. Insurance Public Liability.**
- 13-1 The contractor shall take out and maintain during the life of this contract, such Public Liability (Bodily Injury and Property Damage) insurance as shall protect himself any subcontractor performing work covered under this contract, from claims for damages because of bodily injury, including accidental death, and from claims for property damage, which may arise from operation under this contract, whether such operations be by him or by any subcontractor, or by anyone directly or indirectly employed by either of them. The contractor's insurance shall likewise protect the owner and save him harmless for acts of the contractor. All policies shall list the Owner as an additional insured.

(a) Workers' Compensation:

(1) State	Statutory
(2) Applicable Federal	Statutory

(b) Contractor's General Liability:

(1) General Aggregate	\$2,000,000.00
(2) Each Occurrence	\$1,000,000.00
(3) Products and completed operations, aggregate	\$1,000,000.00
(4) Personal and Advertising injury	\$1,000,000.00
(5) Excess or Umbrella Liability:	
General Aggregate	\$4,000,000.00
Each Occurrence	\$2,000,000.00

(Note) Property damage liability insurance will provide explosion, collapse, and underground coverage where applicable

(c) Automobile Liability:

(1) Bodily Injury	
Each Person	\$1,000,000.00
Each Accident	\$2,000,000.00
(2) Property Damage	
Each Accident	\$1,000,000.00
(3) Combined Single Limit	\$2,000,000.00

(c) Contractual Liability:

(1) Bodily Injury	
Each Person	\$1,000,000.00
Each Accident	\$2,000,000.00

(2) Property Damage	
Each Accident	\$1,000,000.00
(3) Annual Aggregate	\$2,000,000.00

13-2 Owner's Protective Liability: Not required for this project.

13-3 The contractor agrees that he is performing services under this agreement as an independent contractor and not as an employee of the Owner. Therefore, neither the contractor, his agents, employees, the sub-contractors, nor their employees shall be entitled any Owner benefits, including, but not limited to, Workmen's Compensation coverage.

13-4 In addition to the required insurance as specified above, the contractor agrees to indemnify the Owner against any and all claims, losses, causes of actions, settlements and expenses, including legal expenses and costs incurred at trial and appellate levels, arising from any acts or omissions by the contractor, his agents, employers, subcontractors or their employees in an amount of \$1,000,000 for bodily injury and \$500,000 for property damage.

(Signature Page Follows)

IN WITNESS WHEREOF, the Owner and Contractor hereto have executed this Contract on the day and date first above written three (3) counterparts, each of which shall be deemed an original contract. This Agreement will be effective on _____, 2017.

OWNER:

CONTRACTOR:

BY: _____

BY: _____

Attest

Attest

[CORPORATE SEAL]

[CORPORATE SEAL]

Address for giving notices:

Address for giving notices:

Cook County, Georgia:

Contractor:

**Ms. Faye Hughes
Cook County
1200 S. Hutchinson Avenue
Adel, GA 30339**

(If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Agreement.)

License No.

Agent for service of process:

APPROVED AS TO FORM AND CORRECTNESS:

Owner's Attorney

PAYMENT BOND

Attach original copy of Payment Bond here in lieu of this page.

**Failure to include a Payment Bond shall deem this Contract Agreement
incomplete and therefore null and void.**

PERFORMANCE BOND

Attach original copy of Performance Bond here in lieu of this page.

Failure to include a Performance Bond shall deem this Contract Agreement incomplete and therefore null and void.

SCHEDULE OF ESTIMATED QUANTITIES & BID SHEETS

Date: _____

Airport: Cook County Airport, Adel, Georgia

Project: **“Crack Seal and Remark Runway 5-23, 15-33, and Taxiway”**

Total Bid _____
(in words and numbers)

Executed by Principal of Bidding Company

The Owner reserves the right to award none, all or part of the Bid for any reason the Owner feels is their best interest.

GENERAL PROVISIONS

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 where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHTO.

10-02 ACCESS ROAD. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 AIP. The Airport Improvement Program, a grant-in-aid program, administered by the Federal Aviation Administration.

10-04 ADDENDUM. A modification of the plans or other Contract documents issued by the Engineer and distributed to prospective bidders prior to the opening of the proposal.

10-05 ADVERTISEMENT. A public announcement, (Notice to Bidders) as required by local law, inviting bids for work to be performed and materials to be furnished.

10-06 ADVISORY CIRCULAR. A document issued by the FAA containing informational material and guidance, when referred to in the drawings (Plans) and Specifications, advisory circulars shall have the same force as supplemental Specifications.

10-07 AIR OPERATIONS AREA. For the purpose of these specifications, the term air operations area shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft, and contiguous safety areas. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft, and contiguous safety areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway,

taxiway, or apron.

10-08 AIRPORT. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

10-09 ANSI. American National Standards Institute.

10-10 ASTM. The American Society for Testing and Materials.

10-11 AWARD. The acceptance, by the Owner, of the successful bidder's proposal.

10-12 BID BOND (PROPOSAL GUARANTY). The security furnished with a proposal to guarantee that the bidder will enter into a contract if his proposal is accepted by the Owner.

10-13 BIDDER. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-14 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.

10-15 CALENDAR DAY. Every day shown on the calendar, including weekends and holidays.

10-16 CERTIFICATES OF COMPLIANCES. Written statements by the manufacturer stating the material furnished is in conformance with the Specifications.

10-17 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 the work affected by such changes. The work, covered by a change order, shall be within the scope of the Contract.

10-18 CITY. Adel, Georgia

10-19 COUNTY BOARD OF COMMISSIONERS The duly elected members of the County Board of Commissioners.

10-20 CONTRACT. The written agreement covering the work to be performed. The awarded Contract shall include, but is not limited to: the Advertisement; the Contract Form; the Proposal; the Performance Bond; the Payment Bond; any required insurance certificates; the Specifications; the Plans, and any addenda issued to bidders.

10-21 CONTRACT DOCUMENTS. Documents applicable to and specific to the performance of the Contract, including but not limited to the Contract Forms, the Proposal, Plans and Specifications, General Provisions, Special Provisions, Supplemental Agreements, and addenda issued to bidders, all of which constitutes one instrument.

10-22 CONTRACT ITEM (PAY ITEM). A specific unit of work for which a price is provided in the Contract.

10-23 CONTRACT TIME. The number of calendar days stated in the proposal, allowed for completion of the Contract, including authorized time extensions.

10-24 CONTRACTOR. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted with the Owner, 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.

10-25 COUNTY - Cook County, Georgia

10-26 COUNTY COMMISSION – The duly elected members of the County Commission.

10-27 DEPARTMENT. The Georgia Department of Transportation.

10-28 DRAINAGE SYSTEM. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-29 ENGINEER. The individual(s), partnership, firm, or corporation duly authorized by the Owner (Sponsor) to act as the contractual representative.

10-30 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-31 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 Engineer to be necessary to complete the work within the intended scope of the Contract as previously modified.

10-32 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his duly authorized representative.

10-33 FEDERAL SPECIFICATIONS. The Federal Specifications and Standards, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-34 FIELD ALTERATIONS. Written agreements entered into between the Contractor and the Owner, properly executed, covering alterations, changes, additions or deletions to the plans which are necessary for the proper completion of the work.

10-35 GDOT. Georgia Department of Transportation.

10-36 GENERAL CONDITIONS. Shall mean the same as General Provisions.

10-37 GENERAL PROVISIONS. Additional instructions to the Contractor, of a more specific nature, pertaining to his responsibilities and the Owner's responsibilities for proper prosecution of the work.

10-38 INSPECTOR. An authorized representative of the Owner/Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-39 INSTRUCTIONS TO BIDDERS. Instruction of general nature outlining the duties and responsibilities of a bonafide bidder.

10-40 INTENTION OF TERMS. Whenever, in these Specifications or on the Plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer 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, subject in each case to the final determination of the Owner.

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.

10-41 LABORATORY. The official testing laboratories approved by the Owner or other such laboratories as may be designated by the Engineer.

10-42 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.

10-43 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 20 percent of the total amount of the award Contract. All other items shall be considered minor Contract items.

10-44 MATERIALS. Any substance specified for use in the construction of the Contract work.

10-45 MIL SPECIFICATIONS. The Military Specifications and Standard, and indices thereto, that are prepared and issued by the Department of Defense.

10-46 NOTICE TO PROCEED. 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.

10-47 NEC. National Electrical Code.

10-48 NEMA. National Electrical Manufacturers Association..

10-49 OWNER. The term Owner shall mean Cook County, Georgia. For AIP contracts, the term Owner shall have the same meaning as the term Sponsor.

10-50 PAVEMENT. The combined surface course, base course, and sub-base course, if any, considered as a single unit.

10-51 PAYMENT BOND. The approved form of security furnished by the Contractor and his surety as a

guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-52 PERFORMANCE BOND. The approved form of security furnished by the Contractor and his surety as a guaranty that the Contractor will complete the work in accordance with the terms of the Contract.

10-53 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.

10-54 PROJECT. The agreed scope of work for accomplishing specific airport development with respect to a particular airport, as specified in the Plans and Specifications.

10-55 PROPOSAL. The written offer of the bidder (when submitted on the approved proposal forms) specifying the bidder's prices to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the Plans and Specifications.

10-56 PROPOSAL GUARANTY. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his proposal is accepted by the Owner.

10-57 RUNWAY. The area on the airport prepared for the landing and takeoff of aircraft.

10-58 SEQUENCE OF CONSTRUCTION The logical and proper order in which the work shall be accomplished, by stages and phases, by the Contractor, unless ordered to do otherwise by a properly executed field alteration.

10-59 SPECIAL CONDITIONS. Shall mean the same as General Provisions.

10-60 SPECIAL PROVISIONS. The specific clauses setting forth conditions or requirements peculiar to the project under consideration, covering work or materials involved in the proposal and estimate, which are not thoroughly or satisfactorily stipulated in these Specifications.

10-61 SPECIFICATIONS. The directions, conditions and requirements contained herein, supplemented by such "field alteration requests" as may be issued or made pertaining to the method and manner of performing the work, or to quantities and qualities of materials to be furnished under the contract. 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. Where phrases "directed by", "ordered by" or "to the satisfaction of" "the engineer" or "the inspector" occur, it is to be understood that the directions, orders, or instructions to which they relate are within the limitations of, and authorized by the Contract. Where reference is made to specifications of A.S.T.M., AASHTO, FAA Standards for Specifying Construction of Airports, Georgia Department of

Transportation Standard Specifications, etc., it shall be construed to mean the latest or tentative standard in effect on the date of the proposal.

10-62 SPONSOR. Shall mean the same as Owner.

10-63 SUBCONTRACTOR. Any individual, partnership or corporation supplying the Contractor with labor, materials, and supplies, used directly or indirectly by the said Contractor or subcontractor in the prosecution of the work.

10-64 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; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-65 SUBGRADE. The soil which forms the pavement foundation.

10-66 SUPERINTENDENT. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-67 SUPPLEMENTAL AGREEMENT. A written agreement between the Contractor and the Owner covering: (1) work that would increase or decrease the total amount of the awarded Contract, or any major Contract item, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded Contract; or (2) work that is not within the scope of the originally awarded Contract.

10-68 SURETY. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds which are furnished to the Owner by the Contractor.

10-69 TAXIWAY. For the purpose of this document, the term taxiway means 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 or aircraft parking areas.

10-70 WAGE RATES. The general prevailing wage rate as established by the Secretary of Labor.

10-71 TECHNICAL CONDITIONS. Shall mean the same as Technical Provisions.

10-72 TECHNICAL SPECIFICATIONS. The specific instructions to the Contractor as to the manner, quality, methods, and procedures of labor and material to be employed in the prosecution of the various items of work.

10-73 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.

10-74 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 6 hours toward completion of the Contract. Unless work is suspended for causes beyond the Contractor's control, Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work, requiring the presence of an inspector, will be considered as working days.

END OF SECTION 10 - DEFINITIONS

SECTION 20 - PROPOSAL REQUIREMENTS AND CONDITIONS

20-01 NOTICE TO BIDDERS. An official notice to bidders stating the time and place for the submission of sealed proposals on designated projects or proposed work. This notice shall contain a description of the proposed work, instructions to the bidder regarding proposal forms, proposal guaranty, Plans, Specifications, and the reservation of the right of the Owner to reject any or all bids.

20-02 PREQUALIFICATION OF BIDDERS. Each bidder shall furnish the Owner satisfactory evidence of his competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each bidder shall furnish the Owner satisfactory evidence of his financial responsibility. Such 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 Contractor'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 his 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 his (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 he is pre-qualified with the Georgia Department of Transportation (GDOT) and is on the current "bidder's list" of the state of Georgia. Such evidence of GDOT pre-qualification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports hereinbefore specified.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner no later than 10 days prior to the specified date for opening bids.

20-03 CONTENTS OF PROPOSAL FORMS. The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached. The Plans, Specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 ISSUANCE OF PROPOSAL FORMS. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be 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. Contractor default under previous contracts with the Owner.
- d. Unsatisfactory work on previous contracts with the Owner.

20-05 INTERPRETATION OF ESTIMATED 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 hereinafter provided in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 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. He shall satisfy himself as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed Contract.

The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed Contract, Plans, and Specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is

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

20-07 PREPARATION OF PROPOSAL. The bidder shall submit his proposal on the forms furnished by the Owner. All blank spaces in the proposal forms 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 for which he proposes to do 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 sign his proposal correctly and in ink. If the proposal is made by an individual, his 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 under the laws of which 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 his authority to do so and that the signature is binding upon the firm or corporation.

20-08 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 which 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.

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.

20-09 PROPOSAL GUARANTY. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-10 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 before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-11 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 telegram 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.

20-12 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.

20-13 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the

same or different name.

- b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner 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 the subsection titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20 – PROPOSAL AND REQUIREMENTS

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 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 the subsection titled **IRREGULAR PROPOSALS** of Section 20.
- b. If the bidder is disqualified for any of the reasons specified in the subsection titled **DISQUALIFICATION OF BIDDERS** of Section 20.

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 30 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein or at the time of the bid opening..

Award of the Contract shall be made by the Owner to the lowest and best qualified bidder whose proposal conforms to the cited requirements of the Owner.

If only one Proposal is received and the amount of that Proposal exceeds the Engineer's cost estimate for the project, the Owner may, at its option, exercise one of the following:

1. Award the Contract as bid.
2. Negotiate a price which is fair and reasonable and award the Contract as negotiated.
3. Reject the Proposal and re-advertise, perform the work itself, or abandon the project.

In all cases, the negotiated price shall not be greater than the price bid. Prior to negotiations, the Owner will inform the bidder of the Engineer's estimate for the project.

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 the subsection titled APPROVAL OF CONTRACT of this section.

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 hereinbefore specified in the subsection titled CONSIDERATION OF PROPOSALS of this section. 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 the subsection titled 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 which 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.

The successful bidder shall furnish separate performance and payment bonds each in the full bid amount, unless otherwise specified in the Contract Documents.

30-06 EXECUTION OF CONTRACT. Unless otherwise directed, the successful bidder shall sign (execute) the necessary agreements for entering into the Contract and return such signed Contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section, within 30 calendar days from the date mailed or otherwise delivered to the successful bidder. If the Contract is mailed, special handling is recommended.

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 30 calendar day period specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30 – AWARD AND EXECUTION OF CONTRACT

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 and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded Contract quantities, provided that the aggregate of such alterations does not change the total Contract cost or the total cost of any major Contract item by more than 25 percent (total cost being based on the unit prices and estimated quantities in the awarded Contract). Alterations which do not exceed the 25 percent limitation shall not invalidate the Contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original Contract. These alterations which are for work within the general scope of the Contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of Contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25 percent limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. 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.

All supplemental agreements shall be approved by the FAA or GDOT, as applicable, and shall include valid wage determinations of the U.S. Secretary of Labor when the amount of the supplemental agreement exceeds \$2,000. However, if the Contractor elects to waive the limitations of work that increases or decreases the originally awarded Contract or any major Contract item by more than 25 percent, the supplemental agreement shall be subject to the same U.S. Security of Labor wage determination as was included in the originally awarded Contract.

40-03 OMITTED ITEMS. The Engineer may, in the Owner's best interest, omit from the work any Contract

item, except major Contract items. 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 the subsection titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-04 EXTRA WORK. Should acceptable completion of the Contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original Contract or previously issued change orders or supplemental agreements, the same shall be called Extra Work. Extra Work that is within the general scope of the Contract shall be covered by written change order. Change orders for such 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 Engineer's opinion, is necessary for completion of such Extra Work.

When determined by the Engineer to be in the Owner's best interest, he may order the Contractor to proceed with Extra Work by force account as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

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 hereinbefore defined in the subsection titled SUPPLEMENTAL AGREEMENT of Section 10.

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. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas of the airport with respect to his own operations and the operations of all his subcontractors as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80. 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 the subsection titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

With respect to his own operations and the operations of all his 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.

When the Contract requires the maintenance of vehicular traffic on 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 such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall furnish erect, and maintain barricades, warning signs, flagmen, and other traffic control devices in reasonable conformity with the manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office), unless otherwise specified herein. 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.

The Contractor shall make his own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of aircraft and vehicular traffic as specified in this subsection.

The cost of maintaining the aircraft and vehicular traffic specified in this subsection shall not be measured or paid for directly, but shall be included in the various Contract items.

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 Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the Contract.

Except as provided in the subsection titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, 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 utilized in the work as otherwise provided for in the Contract and shall remain the property of the Owner when so utilized 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 either embankment or waste, he may at his option either:

- a. Use such material in another Contract item, providing such use is approved by the Engineer 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 Engineer; or
- c. Use such material for his 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), he shall request the Engineer's approval in advance of such use.

Should the Engineer 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 his own expense, such 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 his use of such material so used in the work or removed from the site.

Should the Engineer 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 his 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 CLEANING UP. 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. He 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 such property Owner.

END OF SECTION 40 – SCOPE OF WORK

SECTION 50 - CONTROL OF WORK

50-01 AUTHORITY OF THE ENGINEER. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. He shall decide all questions which may arise as to the interpretation of the specifications of Plans relating to the work, the fulfillment of the Contract on the part of the Contractor, and the rights of different Contractors on the project. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

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 Engineer 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 his opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, he will advise the Owner of his determination that the affected work be accepted and remain in place. In this event, the Engineer will document his determination and recommend to the Owner a basis of acceptance which will provide for an adjustment in the Contract price for the affected portion of the work. The Engineer's determination and recommended Contract price adjustments will be based on good engineering judgment and such tests or retests of the affected work as are, in his opinion, needed. Changes in the Contract price shall be covered by Contract modifications (change order or supplemental agreement) as applicable.

If the Engineer 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 Engineer's written orders.

For the purpose of this subsection, 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 Engineer's right to insist on strict specifications during the Contractor's prosecution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable

finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority to use good engineering judgment in his determinations as to acceptance of work that is not in strict conformity but will provide a finished product equal to or better than that intended by the requirements of the Contract, Plans, and Specifications.

For AIP contracts, the Engineer should advise the Sponsor if he accepts work that is not in "reasonably close conformity" to the Contract, Plans, and Specifications. The Sponsor will in turn advise the FAA. Change orders or supplemental agreements must bear the written approval of the FAA.

50-03 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS. The Contract, Plans, Specifications, and all referenced standards cited are essential parts of the Contract requirements. 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 FAA advisory circulars; Contract General Provisions shall govern over Plans, cited standards for materials or testing, and cited FAA advisory circulars; Plans shall govern over cited standards for materials or testing and cited FAA advisory circulars.

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, he shall immediately call upon the Engineer for his interpretation and decision, and such decision shall be final.

50-04 COOPERATION OF THE CONTRACTOR. The Contractor will be supplied with two copies each of the Plans and Specifications. He shall have available on the work at all times one copy each of the Plans and Specifications. Additional 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 he shall cooperate with the Engineer and his inspectors and with other Contractors in every way possible. The Engineer shall allocate the work and designate the sequence of construction in case of controversy between Contractors. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his 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 Engineer or his authorized representative.

50-05 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 his work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same projects shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection his Contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him because of the presence and operations of the other Contractors working within the limits of the same project.

The Contractor shall arrange his work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. He shall join his work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 CONSTRUCTION LAYOUT AND STAKES. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout and stakes required for the construction of the work. Such stakes and markings as the Engineer may set for either his own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or his/her employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

50-07 AUTOMATICALLY CONTROLLED EQUIPMENT. Whenever batching or mixing plant equipment is required to be operated automatically under the Contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 78 hours following the breakdown or malfunction, provided this method of operations will product results which conform to all other requirements of the Contract.

50-08 AUTHORITY AND DUTIES OF INSPECTORS. Inspectors employed by the Owner shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the Contract. Inspectors are not authorized to issue instructions contrary to the Plans and Specifications or to act as foreman for the Contractor.

Inspectors employed by the Owner are authorized to notify the Contractor or his representative 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 Engineer for his decision.

50-09 OBSERVATION OF THE WORK. All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer 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 observation.

If the Engineer 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 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.

Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

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 which does not form to the requirements of the Contract, Plans, and Specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

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 the subsection titled Contractor's RESPONSIBILITY FOR WORK of Section 70.

Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the Plans or as given, 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 Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs (incurred by the Owner) from any monies due or to become due 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 which 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 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 shall be responsible for all damage done by his hauling equipment and shall correct such damage at his own expense.

50-12 MAINTENANCE DURING CONSTRUCTION. The Contractor shall maintain the work during construction and until the work is accepted. This 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 cost 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 the subsection titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer 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 condition that exists.

Should the Contractor fail to respond to the Engineer's notification, the Engineer may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the condition that exists. Any maintenance cost incurred by the Owner, shall be deducted from monies due or to become due the Contractor.

50-14 PARTIAL ACCEPTANCE. If any time during the prosecution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, he may request the Engineer to examine the unit. If the Engineer finds upon inspection that the unit has been satisfactory completed in compliance with the Contract, he may accept it as being completed, 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 Engineer and Owner will review the complete project. If all construction provided for and contemplated by the Contract is found to be completed in accordance with the Contract, Plans, and Specifications, such review shall constitute the final review. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final review.

If, however, the review discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another review will be made which shall constitute the final review, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final review.

50-16 CLAIMS FOR ADJUSTMENT AND DISPUTES. If for any reason the Contractor deems that additional compensation is due him for work or materials not clearly provided for in the Contract, Plans, or Specifications or previously authorized as Extra Work, he shall notify the Engineer in writing of his intention to claim such additional compensation before he begins the work on which he bases the claim. If such notification is not given or the Engineer 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 Engineer 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 his written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be constructed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

50-17 WARRANTY AND GUARANTEE. The Contractor warrants to the Owner that all materials furnished under this Contract shall be new unless specified and defects and in conformance with Contract requirements. Any work not so conforming to these standards may be considered defective.

If, within one year after the date of final acceptance of the work, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract, any of the work is found to be defective or not in accordance with Contract requirements, the Contractor shall correct it promptly

after receipt of written notice from the Owner to do so.

The obligations of the Contractor in this paragraph titled WARRANTY AND GUARANTEE shall be in addition to and not in limitation of any obligations imposed upon him by special guarantees required by the Contract or otherwise prescribed by law.

50-18 CONCEALED CONDITIONS. Should conditions encountered below the surface of the ground or should concealed or unknown conditions in an existing structure vary to an unreasonable extent from the conditions indicated by the drawings and Specifications, the Engineer shall be notified by the Contractor and instructions shall be equitably adjusted upon claim of either party made within thirty (30) days after the first observation of the conditions if shown on the drawings or attached to these Specifications, are presented only as information that is available indicating certain conditions found and limited to the exact locations and dates shown. Neither the Owner nor the Engineer shall be responsible for making the determination of water table variations prior to bidding and shall not assume that any water levels shown by the aforesaid core boring data will necessarily be maintained at the level indicated.

50-19 RECORD SET DRAWINGS. The Contractor shall, without additional cost, keep a separate copy of all Specifications, drawings, addenda, modifications, and shop drawings at the site in good order and annotated currently to show all changes made during the construction process. These shall be available to the Engineer for review of record information thereon each month prior to approval of monthly application for payment, and shall be delivered to him for the Owner upon completion of the Project.

Record information shall include but not be limited to record dimensions, finished pavement grades, finished elevation of structures, record inverts, etc.

The Contractor shall, without additional cost, furnish to the Owner three (3) complete sets of all maintenance manuals, parts lists, and operating instructions covering materials, equipment and installations having moving parts. It is mandatory that all of the aforesaid be delivered at the same time and with the materials, equipment, and installations, so that proper installation and operation can be promptly made.

50-20 TERMINATION OF CONTRACTOR'S RESPONSIBILITY. The Contract will be considered complete when all work has been completed and has been accepted by the Owner. The Contractor will then be released from further obligation except as set forth in his bond.

END OF SECTION 50 – CONTROL OF WORK

SECTION 60 - CONTROL OF MATERIALS

60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. The materials used on 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 complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished within 30 calendar days after execution of the Contract but, in all cases, prior to delivery of such materials.

Upon request by the Engineer, the Contractor shall furnish formal written invoices from the materials suppliers. The invoice shall show the date shipped, the quantities, and the unit prices. The Contractor shall purchase materials from suppliers who are willing for the Contractor to furnish the Engineer copies of invoices as noted herein upon request by the Engineer.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. 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.

60-02 SAMPLES, TESTS, AND CITED SPECIFICATIONS. All materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer 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 Engineer, shall be removed at the Contractor's expense. Unless otherwise designated, tests in accordance with the cited standard methods of AASHTO or ASTM which are current on the date of advertisement for bids will be made by and at the expense of the Owner. Samples will be taken by a qualified representative of the Owner. 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 his request.

60-03 CERTIFICATION OF COMPLIANCE. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance 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.

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 Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," 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.

Should the Contractor propose to furnish an "or equal" material or assembly, he shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 PLANT INSPECTION. The Engineer or his 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 his acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

- a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom he has contracted for materials.

- b. The Engineer 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 Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material which has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the Contract, Plans, or Specifications.

60-05 REVIEW AND ACCEPTANCE OF MATERIALS. The Contractor shall furnish to the Engineer, for review, all Contractor's, subcontractor's and manufacturer's drawings, which shall be deemed to include shop material lists and performance data, which may be required by the Specifications, requested by the Engineer or otherwise necessary for the proper execution of the work. At the time of each submission, the Contractor shall in writing call the Engineer's attention to any deviations that the shop drawings may have from the requirements of the Contract documents.

Where called for, the Contractor shall furnish two samples of each material, texture, color, etc., clearly labeled as to name and quality of material, manufacturer and application on the job.

No work requiring a shop drawing or sample submission shall be started until the submission has been reviewed by the Engineer.

The Engineer's review of shop drawings or samples will not relieve the Contractor from his responsibility for any deviations from the requirements of the Contract documents unless the Contractor has in writing called the Engineer's attention to such deviations at the time of submission and the Engineer has given written comments on the specific deviation, nor will it relieve the Contractor from errors or omissions in the shop drawings.

60-06 ENGINEER'S FIELD OFFICE AND LABORATORY. When specified and provided for as a Contract item, the Contractor shall furnish a building for the exclusive use of the Engineer as a field office and field testing laboratory. The building shall be furnished and maintained by the Contractor as specified herein and shall become property of the Contractor when the Contract work is completed.

60-07 STORAGE OF MATERIALS. Materials shall be so stored as 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 so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. 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, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. 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 Engineer 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 his entire expense, except as otherwise agreed to in writing by the owner or lessee of the property.

60-08 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 Engineer. 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 Engineer has approved its use in the work.

60-09 OWNER FURNISHED MATERIALS. The Contractor shall furnish all materials required to complete the work, except those specified herein (if any) to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified herein.

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 which 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 – CONTROL OF MATERIALS.

SECTION 70 - LEGAL RELATIONS 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. He 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 his 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 himself or his 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 prosecution 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, he shall provide for such use by suitable legal agreement with the patentee or Owner. The Contractor and the surety shall indemnify and save 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 prosecution or after the completion of the work.

70-04 RESTORATION OF SURFACES DISTURBED BY OTHERS. Except as listed in the drawings, 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 work without the written permission of the Engineer.

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 so as to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed elsewhere in the Contract documents. When ordered as Extra Work by the Engineer, 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.

70-05 FEDERAL AID PARTICIPATION. For AIP/WPI contracts, the United States Government, through the Federal Aviation Administration (FAA) and/or the State of Georgia through the Georgia Department of Transportation (GDOT) has agreed to reimburse the Owner for some portion of the Contract costs. Such reimbursement is made from time to time upon the Owner's (Sponsor's) request to the FAA/GDOT. In consideration of the FAA's and/or the GDOT's agreement with the Owner, the Owner has included provisions in this Contract pursuant to the requirements of the Airport Improvement Act (Act) of 1982, as amended, and/or the GDOT's Rules and Regulations that pertain to this work.

As required by the Act/Rules, the Contract work is subject to the inspection and approval of duly authorized representatives of the FAA/GDOT, and is further subject to those provisions of the rules and regulations that are cited in the Contract, Plans, or Specifications.

No requirement of the rules and regulations implemented in this Contract shall be construed as making the United States Government, or the State of Georgia 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 shall provide and maintain in a neat, sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions are unsanitary, hazardous, or dangerous to his health or safety.

70-07 PUBLIC CONVENIENCE AND SAFETY. The Contractor shall control his operations and those of his 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 his own operations and those of his subcontractors and all suppliers in accordance with the subsection titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-08 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices, including flagmen if deemed necessary by the Owner, in reasonable conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office).

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of AC 150/5340-1, Marking of Paved Areas on Airports, latest edition.

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and his parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2, Operational Safety on Airports During Construction Activity, latest edition.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to FAA Advisory Circular 150/5370-2, latest edition.

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work which requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their dismantling is directed by the Engineer.

Open-flame type lights shall not be permitted within the air operations areas of the airport.

70-09 WORK ACCESS. Any haul roads, ditch crossings, storage areas, etc., that the Contractor may require shall be constructed and maintained at the Contractor's expense.

The Contractor shall not use runways, taxiways or other paved areas on the air operations portions of the airport for access to and from the job site unless authorized by the Owner. No equipment or vehicles will be allowed on

the air operations portions of the airport except as authorized by the Owner.

Any runways, taxiways or other paved areas damaged by the Contractor's vehicles or equipment shall be repaired by the Contractor at no cost to the Owner.

70-10 USE OF EXPLOSIVES. When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property (including new work), and shall obey all State, Federal and other Governmental regulations applying to transportation, storage, use, and control of such explosives. The Contractor shall be solely responsible for any and all damage resulting from the transportation, storage, use, and control of explosives in the prosecution of the work by the Contractor, the Contractor's agents, or employees; and shall hold the Owner harmless from all claims of damages resulting in any manner therefrom.

The Contractor shall notify each public utility owner having structures or other installations, above or below ground, near the site of the work of his intention to use explosives. Such notice shall be given sufficiently in advance to enable the utility owners to take such steps as they may deem necessary to protect their property from injury. Such notice shall not relieve the Contractor of responsibility for all damages resulting from his blasting operations.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked DANGEROUS EXPLOSIVES. Explosives and detonators shall be stored in separate storage facilities in separate areas. Where no local laws or ordinances

apply, storage shall be provided as may be satisfactory to the Engineer and, in general, not closer than 1,000 feet from the work or from any building, road, or other place of human occupancy.

The use, storage or transport of electrical blasting caps shall not be permitted on or within 1,000 feet of the air operations area, without the written approval of the Owner and unless the air operations area is closed to all aircraft movements. In all cases where the transport, storage, or use of explosives is undertaken, such activities shall be controlled and directed by fully qualified representatives of the Contractor.

Whenever electric detonators are used, all radio transmitters shall be turned off within a radius of 500 ft (150 m). No blasting supplies shall be transported in vehicles with two-way radio unless the transmitter is turned

off, or extra shielding precautions are taken. Appropriate signs shall be placed so as to give ample warning to anyone driving a vehicle equipped with two-way radio.

70-11 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 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 prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

The Contractor shall plan, coordinate, and prosecute the work so that disruption to personal property and business is held to a practical minimum.

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, he shall restore, at his own 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 he shall make good such damage or injury in an acceptable manner.

70-12 RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify and hold harmless the Engineer and the Owner, including their officers 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 his contract, as may be considered necessary by the Owner for such purpose, may be retained for the use of the Owner or, in case no money is due, his surety may be held until

such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid 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 is adequately protected by public liability and property damage insurance.

70-13 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 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.

70-14 OPENING SECTIONS OF THE WORK TO TRAFFIC. Should it be 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 shall be specified herein and indicated on the 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 the work listed above, such portion shall be accepted by the Owner in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, 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 his expense.

70-15 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50, 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 his 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, seedings, and sodding furnished under his Contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-16 CONTRACTOR'S RESPONSIBILITY FOR UTILITIES AND FACILITIES OF OTHERS. As provided in the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (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 his 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 the Owners and THE PERSON TO CONTACT are indicated in the Special Provisions or General Notes.

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 his 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 his plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided hereinbefore in this subsection and the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification hereinbefore provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in his plan of operations that would affect such owners.

Prior to commencing the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of his 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 Engineer.

The Contractor's failure to give the two day's notice hereinabove provided shall be cause for the Engineer 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 excavation methods acceptable to the Engineer within 3 feet 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, he shall immediately notify the proper authority and the Engineer 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 Engineer 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 his operations whether or not due to negligence or accident. The Contract Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his surety.

70-17 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.

70-18 PERSONAL LIABILITY OF PUBLIC OFFICIALS. In carrying out any of the Contract provisions or in exercising any power or authority granted to him by this Contract, there shall be no liability upon the

Engineer, his 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.

70-19 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 his surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his 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.

70-20 ENVIRONMENTAL PROTECTION. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. He shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

In the event of conflict between Federal, State or local laws, codes, ordinances, rules and regulations concerning pollution control, the most restrictive applicable ones shall apply.

The Contractor shall pay special attention to the pollution control requirements of the several specifications. Work items which may cause excessive pollution and shall be closely controlled by the Contractor are:

- a. Clearing, grubbing, burning or other disposal.
- b. Stripping, excavation, and embankment.
- c. Drainage and ditching.
- d. Aggregate production, handling and placing.
- e. Cement, lime or other stabilization.
- f. Concrete and bituminous materials handling, production, and paving.
- g. Seeding, fertilizing, mulching and use of herbicides or insecticides.
- h. Contractor's own housekeeping items; haul roads; sanitary facilities; water supply; equipment fueling, servicing and cleaning; job clean up and disposal.

When the Contractor submits his tentative progress schedule in accordance with PROSECUTION and PROGRESS, Section 80, he shall also submit for acceptance of the Engineer, his schedules for accomplishment of temporary and permanent erosion control work, as are applicable for clearing, grading, structures at watercourses, construction, and paving, and his proposed method of erosion control schedules and methods of operations have been accepted by the Engineer.

All bituminous and portland cement concrete proportioning plants shall meet state requirements.

The following listed stipulations shall apply to this Contract unless more restrictive ones are specified by the Plans, special provisions, laws, codes, ordinance, etc. Cost of pollution control shall be incidental to the appropriate work items unless otherwise specified.

(1) Control of Water Pollution and Siltation.

- a. All work of water pollution and siltation control is subject to inspection by the local and/or state governmental enforcing agent.
- b. All applicable regulations of fish and Wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the Contract.
- c. Construction operations shall be conducted in such manner as to reduce erosion to the practicable minimum and to prevent damaging siltation of watercourses, streams, lakes or reservoirs. The surface area of erodible land, either on or off the airport site, exposed to the elements by clearing, grubbing or grading operations, including gravel pits, waste or disposal areas and haul roads, at any on time, for this Contract, shall be subject to approval of the Engineer and the duration of such exposure prior to final trimming and finishing of the areas shall have full authority to order the suspension of grading and other operations pending adequate and proper performance of trimming, finishing and maintenance work or to restrict the area of erodible land exposed to the elements.
- d. Materials used for permanent erosion control measures shall meet the requirements of the applicable Specifications. Gravel or stone, consisting of durable particles of rock and containing only negligible quantities of fines, shall be used for construction pads, haul roads and temporary roads in or across streams.
- e. Where called for on the Plans, a stilling basin shall be constructed to prevent siltation in the stream from construction operations.

- f. The disturbance of lands and waters that are outside the limits of construction as staked in prohibited, except as found necessary and approved by the Engineer.
 - g. The Contractor shall conduct his work in such manner as to prevent the entry of fuels, oils, bituminous materials, chemicals, sewage or other harmful materials into streams, rivers, lakes or reservoirs.
 - h. Water from aggregate washing or other operations containing sediment shall be treated by filtration, by use of a settling basin or other means to reduce the sediment content to a level acceptable to the local and/or state governmental enforcing agent.
 - i. All waterways shall be cleared as soon as practicable of falsework, piling, debris or other obstructions placed during construction operations and not a part of the finished work. Care shall be taken during construction and removal of such barriers to minimize the muddying of a stream.
 - j. The Contractor shall care for the temporary erosion and siltation control measures during the period that the temporary measures are required and for the permanent erosion control measures until the Contract has been completed and accepted. Such care shall consist of the repair of areas damaged by erosion, wind, fire or other causes.
 - k. Permanent and temporary erosion control work that is damaged due to the Contractor's operations or where the Work required is attributed to the Contractor's negligence, carelessness or failure to install permanent controls at the proper time, shall be repaired at the Contractor's expense.
- (2) Open Burning of Combustible Wastes.
- a. The Contractor shall obtain a burning permit from local authorities, where applicable, prior to any burning.
 - b. All burning shall conform to the conditions of the permit, except that the conditions herein shall apply if they are more restrictive.

- c. No tires, oils (except atomized fuels applied by approved equipment), asphalt, paint, or coated metals shall be permitted in combustible waste piles.
 - d. Burning will not be permitted within 1,000 feet of a residential or built-up area nor within 100 feet of any standing timber or flammable growth unless otherwise specified.
 - e. Burning shall not be permitted unless the prevailing wind is away from a nearby town or built-up area.
 - f. Burning shall not be permitted during a local air inversion or other climatic condition as would result in a pall of smoke over a nearby town or built-up area.
 - g. Burning shall not be permitted when the danger of brush or forest fires is made known by Federal, State, or local officials.
 - h. The size and number of fires shall be restricted to avoid the danger of brush or forest fires. Burning shall be done under surveillance of a watchman who shall have fire-fighting equipment and tools readily available.
- (3) Control of Other Air Pollutants.
- a. Minimum possible areas of open grading, borrow or aggregate excavation shall be exposed at one time, consistent with the progress of the Work.
 - b. Grading areas shall be kept at proper moisture conditions.
 - c. Sand or dust blows shall be temporarily mulched, with or without seeding, or otherwise controlled with stabilizing agents.
 - d. Temporary roads, haul routes, traffic or work areas shall be stabilized with dust palliative, penetration asphalt, wood chips, or other approved measures to prevent dust pollution.
 - e. Cements, fertilizers, chemicals, volatiles, etc., shall be stored in proper containers or with

proper coverings to prevent accidental discharge into the air.

- f. Aggregates bins, cement bins, and dry material batch trucks shall be properly covered to prevent loss of material to the air.
- g. Drilling, grinding and sand blasting apparatus shall be equipped with water, chemical, or vacuum dust controlling systems.
- h. Applications of chemicals and bitumens shall be held to recommended rates.
- i. Bituminous mixing plants shall be equipped with dust collectors as noted in the Specifications.
- j. Quarrying, batching, and mixing operations and the transfer of material between trucks, bins, or stockpiles shall be properly controlled to minimize dust diffusion.
- k. When necessary, certain operations shall be delayed until proper wind or climatic conditions exist to dissipate or inhibit potential pollutants to the satisfaction of the Engineer.

70-21 HAZARDOUS AND/OR TOXIC WASTE. When the Contractor's operations encounter or expose any abnormal condition which may indicate the presence of a hazardous and/or toxic waste, such operations shall be discontinued in the vicinity of the abnormal condition and the Engineer shall be notified immediately. The presence of barrels, discolored earth, metal, wood, or visible fumes, abnormal odors, excessively hot earth, smoke, or anything else which appears abnormal may be indicators of hazardous and/or toxic wastes and shall be treated with extraordinary caution as they are evidence of abnormal conditions.

The Contractor's operations shall not resume until so directed by the Engineer.

Disposition of the hazardous and/or toxic waste will be made in accordance with the requirements and regulations of the Georgia Department of Natural Resources, Environmental Protection Division. Where the Contractor performs work necessary to dispose of hazardous and/or toxic waste, payment will be made at the unit prices for pay items included in the contract which are applicable to such work or, where the contract does not include such pay items, payment will be as provided in subsection titled EXTRA WORK of Section 40 and the subsection titled

PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT WORK of Section 90.

70-22 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 his operations, any building, part of a building, structure, or object which is incongruous with its surroundings, he shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and will direct the Contractor to either resume his operations or to suspend operations as directed.

Should the Engineer 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 modification (change order or supplemental agreement) as provided in the subsection titled EXTRA WORK of Section 40 and the subsection titled PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT WORK of Section 90. If appropriate, the Contract modification shall include an extension of Contract time in accordance with the subsection titled Determination and Extension of Contract Time of Section 80.

70-23 LIENS. Neither the final payment nor any part of the retained percentage shall become due until the Contractor, if required, shall deliver to the Owner a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof, and, if required in either case, an affidavit that so far as he has knowledge or information the releases and receipts include all the labor and materials for which a lien could be filed: but the Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Engineer, to indemnify the Owner against any lien. If any lien remains unsatisfied after all payment are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

70-24 INSURANCE. The Contractor shall not commence work under this Contract until he has obtained and provided insurance of the character specified in the Contract Agreement which will provide adequate protection to the Owner and the Contractor against all liabilities, damages and accidents, nor shall he commence work until such insurance has been approved by the Owner.

Neither approval by the Owner, nor a failure to disapprove insurance furnished by a Contractor shall release the

Contractor of full responsibility for liability, damages and accidents as set forth herein. The Contractor shall maintain such required insurance in force during the life of this Contract, and no modification or change in insurance coverage and provisions shall be made without thirty (30) days written advance notice to the Owner.

The Contractor shall furnish certificates of insurance to the Owner prior to commencing any operations under this Contractor, which certificates shall clearly indicate that the Contractor has obtained insurance, in this type, amount and classification, in strict compliance with this subsection.

70-25 SUBMITTAL OF WAGE RATE SUMMARY. It shall be a condition of this Contract and shall be made a condition of all sub-contractors entered into pursuant to this Contract that the Contractor and any sub-contractor will submit to the Owner weekly, one copy of the Summary of Wage Rates.

END OF SECTION 70 – LEGAL RELATIONS

SECTION 80 - PROSECUTION AND PROGRESS

80-01 SUBLETTING OF CONTRACT. The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or Contracts, or any portion thereof, or of his/her right, title, or interest therein, without written consent of the Owner. Should the Contractor elect to assign his Contract, said assignment shall be approved by the Contractor's surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

Upon such approval, the Contractor will be permitted to sublet a portion or portions thereof, but shall perform, with his/her own organization, work amounting to not less than thirty percent (30%) of the total Contract cost, including materials, equipment, and labor. Purchase of materials by the Contractor for use by a sub-contractor will not be allowed when computing the 30% requirement.

The Contractor shall file copies of all approved sub-contracts with the Engineer.

The Owner will not recognize any sub-contractor 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 another designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

80-02 PRE-CONSTRUCTION CONFERENCE. After the award of the Contract and prior to the issuance of the "Notice to Proceed", a Pre-construction Conference will be held to discuss the following topics and/or additional items as needed:

1. Establish the "Notice to Proceed" date.
2. Establish procedures for handling shop drawings, Contractor submittals, and procedures for processing applications for payment.
3. Establish responsibilities on the project level and to permit any necessary discussion of matters pertaining to the order of work, the Plans and specifications, traffic control, erosion control, material sources, disposal sites, airport safety plans, placement of traffic control barricades, Contractor staging areas, airport access points, utility service adjustments or other items that may affect the project.
4. Meet other personnel on the project and become familiar with their areas of responsibility and extent of authority, and to establish a working understanding between the parties involved in the project.
5. Review the Contract documents, establish progress of work schedules, and discuss Special Provisions and

Technical Specifications as needed.

The conference should be scheduled at least 14 days in advance, held at a convenient location near the project, and include, but not be limited to, representatives of the following organizations: GDOT, the Owner, the Project Engineer and on-site inspector, the Contractor, Contractor's job superintendent, major sub-contractors, major material suppliers, utility companies as needed, major airport tenants, and other affected organizations as required.

80-03 NOTICE TO PROCEED. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date Contract time will be charged. The Contractor shall begin the Work to be performed under the Contract within 10 calendar days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction will begin.

80-04 PROSECUTION AND PROGRESS. Unless otherwise specified, the Contractor shall submit his progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. 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 Engineer's request, submit a revised schedule for completion of the work within the Contract time and modify his operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any work prior to the date set forth in the notice to proceed.

80-05 LIMITATION OF OPERATIONS. The Contractor shall control his operations and the operations of his subcontractors and all suppliers so as to provide for the free and unobstructed movement of aircraft in the AIR OPERATIONS AREAS of the airport.

When the work requires the Contractor to conduct his operations within an AIR OPERATIONS AREA of the airport, the work shall be coordinated with airport management (through the Engineer) at least 48 hours prior to

commencement of such work. The Contractor shall not close an AIR OPERATIONS AREA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the Contract work requires the Contractor to work within an AIR OPERATIONS AREA of the airport on an intermittent basis (intermittent opening and closing of the AIR OPERATIONS AREA), the Contractor shall maintain constant communications as hereinafter specified; immediately obey all instructions to vacate the AIR OPERATIONS AREA; immediately obey all instructions to resume work in such AIR OPERATIONS AREA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AIR OPERATIONS AREA until the satisfactory conditions are provided.

80-06 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 sub-contractor who the Engineer determines does not perform work in a proper and skilled manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or sub-contractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer.

Should the Contractor fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until such orders are complied with.

All equipment which 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 be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from 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 others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the Contract, he may request authority from the Engineer 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 Engineer 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 Engineer 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 subsection.

80-07 TEMPORARY SUSPENSION OF THE WORK. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the work, or for such time as is 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 Owner's order to suspend work to the effective date of the Owners' order to resume the work. The Contractor shall submit with his claim information substantiating the amount shown on the claim. The Engineer 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, for suspensions made at the request of the Contractor, or for any other delay provided for in the Contract, Plans, or Specifications.

The work shall be resumed when conditions are favorable or when corrective measures satisfactory to the Engineer have been applied; when, and as ordered by the Engineer in writing.

The Contractor shall not stop the work without authority. If the work is stopped by any temporary or permanent injunction, court restraining order, process or judgment of any kind, directed to either of the parties hereto, then such period or delay will not be charged against the Contract Time nor shall the Owner be liable to the Contractor on account of such delay or termination of work.

If it should become 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. He 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.

80-08 DETERMINATION AND EXTENSION OF CONTRACT TIME. The number of days allowed for completion of the work as stated in the Proposal and Contract and shall be known as the Contract Time. Contract Time is based on the originally estimated quantities as described in the subsection titled INTERPRETATION OF ESTIMATED QUANTITIES of Section 20. Should the satisfactory completion of the Contract require performance of work in greater quantities than those estimated in

the proposal, 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 Contract Time shall not consider either the cost of work or the extension of Contract Time that has been covered by change order or supplemental agreement and shall be made at time of final payment.

Should the Contract Time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

- a. Contract time based on **Working Days** shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his weekly statement of the number of working days charged against the Contract Time during the week and the number of working days currently specified for completion of the Contract (the original Contract Time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

The Engineer shall base his weekly statement of Contract Time charged on the following considerations:

- (1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least 6 hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Engineer for reasons not the fault of the Contractor shall not be charged against the Contract Time.
 - (2) The Engineer will not make charges against the Contract Time prior to the effective date of the notice to proceed.
 - (3) The Engineer will begin charges against the Contract Time on the first working day after the effective date of the Notice to Proceed.
 - (4) The Engineer will not make charges against the Contract Time after the date of final acceptance as defined in the subsection title FINAL ACCEPTANCE of Section 50.
 - (5) The Contractor will be allowed 1 week in which to file a written protest setting forth his objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.
- b. 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.

- c. When the Contract Time is a **Specified Completion Date**, it shall be the date on which all Contract Work shall be substantially completed.

If the Contractor finds it impossible for reasons beyond his control to complete the work within the Contract Time as specified, or as extended in accordance with the provisions of this subsection, he may, at any time prior to the expiration of the Contract time as extended, make a written request to the Engineer for an extension of time setting forth the reasons which he believes will justify the granting of his request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he may 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.

80-09 FAILURE TO COMPLETE ON TIME. For each calendar day, as specified in the Contract, that any work remains uncompleted after the Contract time (including all extensions and adjustments as provided in the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this section) the sum specified in the Contract and proposal as **liquidated damages** will be deducted from any money due or to become due the Contractor or his surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in his Contract. See "Instructions to Bidders" and "Special Provisions" for specific information on **liquidated damages**.

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.

80-10 DEFAULT AND TERMINATION OF CONTRACT. The Contractor shall be considered in default of his 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 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 prosecution 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 him 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 Engineer consider the Contractor in default of the Contract for any reason hereinbefore, he 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 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 prosecution 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.

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.

80-11 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 prosecution 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 Engineer.

Termination of the Contract or a portion thereof shall neither relieve the Contractor of his responsibilities for the completed work nor shall it relieve his surety of its obligation for and concerning any just claim arising out of the work performed.

END OF SECTION 80 – PROSECUTION AND PROGRESS

SECTION 90 - MEASUREMENT AND PAYMENT

90-01 MEASUREMENT OF QUANTITIES. All work completed under the Contract will be measured by the Engineer, or his authorized representatives, using units of measurement specified in the Contract Documents.

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 (1 sq. meter) 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 Engineer.

Structures will be measured according to neat lines shown on the Plans or as altered to fit field conditions.

Unless otherwise specified, all Contract items which are measured by the linear foot (meter) 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.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

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 inches.

The term "ton" will mean the short ton consisting of 2,000 pounds (907 kilograms) avoirdupois. All materials which are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material be 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 Engineer directs, and each truck shall bear a plainly legible identification mark.

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 to the Engineer, 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. When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (meter) may be weighed, and such weights will be converted to cubic yards (meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon, ton or liter. When measured by volume, such volumes will be measured at 60⁰ F (15⁰ C) or will be corrected to the volume at 60⁰ F (15⁰ C) using ASTM D 1250 for asphalts or ASTM D 633 for tars.

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 bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kilogram) or hundredweight (kilogram).

Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

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.

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 by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT work of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, 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 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.

Scales shall be accurate within one-half percent of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector 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 one-tenth of 1 percent of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (23 kilogram) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales "over-weighing" (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighing-accuracy test will be reduced by the percentage of error in excess of one-half of one percent.

In the event inspection reveals the scales have been "under-weighing" (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

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.

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 Engineer. 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.

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 prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS of Section 70.

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.

The payment of any partial estimate prior to Final Acceptance of the Project as provided in GENERAL PROVISIONS, SECTION 50 shall in no way affect the obligation of the Contractor to repair or renew any defective parts of the construction or to be responsible for all damages due to such defects.

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 the subsection titled ALTERATION OF WORK AND

QUANTITIES of Section 40, 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 his unbalanced allocation of overhead and profit among the contract, items, or from any other cause.

90-04 PAYMENT FOR OMITTED ITEMS. As specified in the subsection titled OMITTED ITEMS of Section 40, the Engineer 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 Engineer 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 Engineer'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 Engineer'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 Engineer'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 AND FORCE ACCOUNT WORK. Extra Work, performed in accordance with the subsection titled EXTRA WORK of Section 40, will be paid for at the Contract prices or agreed prices specified in the change order or supplemental agreement authorizing the Extra Work. When the change order or supplemental agreement authorizing the Extra Work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus a negotiated and agreed upon allowance for overhead and profit.

- a. 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.
- b. Comparison of Record. The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.

- c. Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:
1. Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
 2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 3. Quantities of materials, prices, and extensions.
 4. Transportation of materials.
 5. Cost of property damage, liability and workman's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accompanied and supported by a receipted invoice for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from his stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

90-06 PARTIAL PAYMENTS. Partial payments will be made at least once each month as the work progresses. Said payments will be based upon estimates prepared by the Engineer of the value of the work performed and materials complete in place in accordance with the Contract, Plans, and Specifications.

No partial payment will be made when the amount due the Contractor since the last estimate amounts to less than five hundred dollars.

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the

Contractor's option) in the subsection titled PAYMENT OF WITHHELD FUNDS of this section. The balance (90 percent) of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his option, as provided in the subsection titled PAYMENT OF WITHHELD FUNDS of this section, no such 10 percent retainage shall be deducted.

When not less than 95 percent of the work has been completed the Engineer may, at his discretion and with the consent of the surety, prepare an estimate from which will be retained an amount not less than twice the Contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer 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 the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section.

90-07 PAYMENT OF WITHHELD FUNDS. Section intentionally left blank.

90-08 ACCEPTANCE AND FINAL PAYMENT. When the Contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of his 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 Engineer 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 Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer'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 the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, 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 the subsection titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, 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.

END OF SECTION 90 – MEASUREMENT AND PAYMENT.

SECTION 100 - CONTRACTOR QUALITY CONTROL PROGRAM

100-01 GENERAL. When the specifications require a Contractor Quality Control Program, the Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified herein and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The intent of this section is to enable the Contractor to establish a necessary level of control that will:

- a. Adequately provide for the production of acceptable quality materials.
- b. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.
- c. Allow the Contractor as much latitude as possible to develop his or her own standard of control.

The Contractor shall be prepared to discuss and present, at the preconstruction conference, his/her understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed by the Engineer. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed.

The quality control requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the acceptance testing requirements. Acceptance testing requirements are the responsibility of the Engineer.

100-02 DESCRIPTION OF PROGRAM.

- a. General Description. The Contractor shall establish a Quality Control Program to perform inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. This Quality Control Program shall ensure conformance to applicable specifications and plans with respect to materials, workmanship, construction, finish, and functional performance. The Quality Control Program shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of quality control.

- b. Quality Control Program. The Contractor shall describe the Quality Control Program in a written document which shall be reviewed by the Engineer prior to the start of any production, construction, or off-site fabrication. The written Quality Control Program shall be submitted to the Engineer for review at least 5 calendar days before the preconstruction conference.

The Quality Control Program shall be organized to address, as minimum, the following items:

- (1) Quality control organization;
- (2) Project progress schedule;
- (3) Submittal schedule;
- (4) Inspection requirements;
- (5) Quality control testing plan;
- (6) Documentation of quality control activities; and
- (7) Requirements for corrective action when quality control and/or acceptance criteria are not met.

The Contractor is encouraged to add any additional elements to the Quality Control Program that he/she deems necessary to adequately control all production and/or construction process required by this contract.

100-03 QUALITY CONTROL ORGANIZATION. The Contractor's Quality Control Program shall be implemented by the establishment of a separate quality control organization. An organizational chart shall be developed to show all quality control personnel and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all quality control staff by name and function, and shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work. If necessary, different technicians can be utilized for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the Quality Control Program, the personnel assigned shall be subject to the qualification requirements of paragraph 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The quality control organization shall consist of the following minimum personnel:

- a. Program Administrator. The Program Administrator shall be full-time employee of the Contractor, or a consultant engaged by the Contractor. The Program Administrator shall have a minimum of 5 years experience in airport and/or highway construction and shall have had prior quality control experience on a project of ~~comparable~~ size and scope as the contract.

Additional qualifications for the Program Administrator shall include at least 1 of the following requirements:

- (1) Professional engineer with 1 year of airport paving experience acceptable to the Engineer.
- (2) Engineer-in-training with 2 years of airport paving experience acceptable to the Engineer.

- (3) An individual with 3 years of highway and/or airport paving experience acceptable to the Engineer, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.
- (4) Construction materials technician certified at Level III by the National Institute for Certification in Engineering Technologies (NICET).
- (5) Highway materials technician certified at Level III by NICET.
- (6) Highway construction technician certified at Level III by NICET.
- (7) A NICET certified engineering technician in Civil Engineering Technology with 5 years of highway and/or airport paving experience acceptable to the Engineer.

The Program Administrator shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract plans and technical specifications. The Program Administrator shall report directly to a responsible officer of the construction firm. The Program Administrator may supervise the Quality Control Program on more than one project provided that person can be at the job site within 2 hours after being notified of a problem.

- b. Quality Control Technicians. A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall be either engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II or higher construction materials technician or highway construction technician and shall have a minimum of 2 years of experience in their area of expertise.

The quality control technicians shall report directly to the Program Administrator and shall perform the following functions:

- (1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by Section 100-06.

- (2) Performance of all quality control tests as required by the technical specifications and Section 100-07.

Certification at an equivalent level, by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

- c. **Staffing Levels.** The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

100-04 PROJECT PROGRESS SCHEDULE. The Contractor shall submit a coordinated construction schedule for all work activities. The schedule shall be prepared as a network diagram in Critical Path Method (CPM), PERT, or other format, or as otherwise specified in the contract. As a minimum, it shall provide information on the sequence of work activities, milestone dates, and activity duration.

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.

100-05 SUBMITTAL SCHEDULE. The Contractor shall submit a detailed listing of all submittal (e.g., mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include:

- a. Specification item number;
- b. Item description
- c. Description of submittal;

- d. Specification paragraph requiring submittal; and
- e. Scheduled date of submittal.

100-06 INSPECTION REQUIREMENTS. Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by Section 100-07.

Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature for work. These shall include the following minimum requirements.

- a. During plant operation for material production, quality control test results and periodic inspections shall be utilized to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment utilized in proportioning and mixing shall be inspected to ensure its proper operating condition. The Quality Control Program shall detail how these and other quality control functions will be accomplished and utilized.
- b. During field operations, quality control test results and periodic inspections shall be utilized to ensure the quality of all materials and workmanship. All equipment utilized in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The Program shall document how these and other quality control functions will be accomplished and utilized.

100-07 QUALITY CONTROL TESTING PLAN. As part of the overall Quality Control Program, the Contractor shall implement a quality control testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional quality control tests that the Contractor deems necessary to adequately control production and/or construction processes.

The testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

- a. Specification item number (e.g., P-401);
- b. Item description (e.g., Plant Mix Bituminous Pavements);
- c. Test type (e.g., gradation, grade, asphalt content);
- d. Test standard (e.g., FM, ASTM, or AASHTO test number, as applicable);
- e. Test frequency (e.g. as required by technical specifications or minimum frequency when requirements are not stated);
- f. Responsibility (e.g., plant technician); and
- g. Control requirements (e.g., target, permissible deviations).

The testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D 3665. The Engineer shall be provided the opportunity to witness quality control sampling and testing.

All quality control test results shall be documented by the Contractor as required by Section 100-08.

100-08 DOCUMENTATION. The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the Contractor's Program

Administrator.

Specific Contractor quality control records required for the contract shall include, but are not necessarily limited to, the following records:

- a. Daily Inspection Reports. Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations on a form acceptable to the Engineer. These technician's daily reports shall provide factual evidence that continues quality control inspections have been performed and shall, as a minimum, include the following:
 - (1) Technical specification item number and description;
 - (2) Compliance with approved submittal;
 - (3) Proper storage of materials and equipment;
 - (4) Proper operation of all equipment;
 - (5) Adherence to plans and technical specifications;
 - (6) Review of quality control tests; and
 - (7) Safety inspection.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible quality control technician and the Program Administrator. The Engineer shall be provided at least one copy of each daily inspection report on the work day following the day of record.

- b. Daily Test Reports. The Contractor shall be responsible for establishing a system which will record all quality control test results. Daily test reports shall document the following information:
 - (1) Technical specification item number and description;
 - (2) Test designation;
 - (3) Location;

- (4) Date of test;
- (5) Control requirements;
- (6) Test results;
- (7) Causes for rejection;
- (8) Recommended remedial actions; and
- (9) Retests.

Test results from each day's work period shall be submitted to the Engineer prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible quality control technician and the Program Administrator.

100-09 CORRECTIVE ACTION REQUIREMENTS. The quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believe , to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the technical specifications.

The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and utilize statistical quality control charts for individual quality control tests. The requirements for corrective action shall be linked to the control charts.

100-10 SURVEILLANCE BY THE ENGINEER. All items of material and equipment shall be subject to surveillance by the Engineer at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed herein and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to surveillance by the Engineer at the site for the same purpose.

Surveillance by the Engineer does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.

100-11 NONCOMPLIANCE.

- a. The Engineer will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the Engineer or his/her authorized representative to the Contractor or his/her authorized representative at the site of work, shall be considered sufficient notice.
- b. In cases where quality control activities do not comply with either the Contractor's Quality Control Program or the contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Engineer, the Engineer may:
 - (1) Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.
 - (2) Order the Contractor to stop operations until appropriate corrective actions is taken.

END OF SECTION 100 – CONTRACTOR QUALITY CONTROL PROGRAM

SECTION 110

METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL)

110-01 GENERAL. When the specifications provide for acceptance of materials based on the methods of estimating percentage within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (\bar{X}) and sample standard deviation (S_n) of the specified number (n) of sub-lots for the lot and the specified tolerance limit, L of lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index(s) (Q_L for Lower Quality Index and/or Q_U for Upper Quality Index) is computed and the PWL for the lot for the specified n is determined from Table 1.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the population material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the contractor that, in order to consistently offset the contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. in all cases, it is the responsibility of the contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-02 METHOD FOR COMPUTING PWL. The computational sequence for computing the PWL is as follows:

- a. Divide the lot into n sub-lots in accordance with the acceptance requirements of the specification.
- b. Locate the random sampling position within the subplot in accordance with the requirements of the specification.
- c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.
- d. Find the sample average (\bar{X}) for all sub-lot values within the lot by using the following formula:

$$X = (x_1 + x_2 + x_3 + \dots x_n) / n$$

Where:

X = Average of all subplot values within a lot

x_1, x_2 = Individual sub-lot values

n = Number of sub-lots

- e. Find the standard deviation S_n by use of the following formula:

$$S_n = [(d_1^2 + d_2^2 + d_3^2 + \dots d_n^2) / n-1]^{\square\square\square}$$

Where:

S_n = standard deviation of the number of subplot values in the set

d_1, d_2, \dots = deviations of the individual subplot values X_1, X_2, \dots from the average value X that is: $d_1 = (x_1 - X), d_2 = (x_2 - X) \dots d_n = (x_n - X)$

n = number of sub-lots

- f. For single sided specification limits (i.e., L only), compute the Lower Quality Index Q_L by use of the following formula:

$$Q_L = (X - L) / S_n$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L , using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

- g. For **double sided specification limits (i.e. L and U)**, compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$Q_L = (X - L) / S_n \text{ and}$$

$$Q_U = (U - X) / S_n$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U , using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher

value of P_L or P_U . Determine the PWL by use of the following formula: $PWL = (P_U + P_L) - 100$

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A

a. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

A-1 96.60

A-2 97.55

A-3 99.30

A-4 98.35

$n = 4$

2. Calculate average density for the lot.

$$X = (x_1 + x_2 + x_3 + \dots x_n) / n$$

$$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$$

$$X = 97.95 \text{ percent density}$$

3. Calculate the standard deviation for the lot.

$$S_n = [((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2) / 4 - 1]^{1/2}$$

$$S_n = [(1.82 + 0.16 + 1.82 + 0.16) / 3]^{1/2}$$

$$S_n = 1.15$$

4. Calculate the Lower Quality Index Q_L for the lot ($L=96.3$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (97.95 - 96.30) / 1.15$$

$$Q_L = 1.4384$$

5. Determine PWL by entering Table 1 with $Q_L = 1.44$ and $n = 4$.

$$PWL = 98$$

b. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

$$A-1 \quad 5.00$$

$$A-2 \quad 3.74$$

$$A-3 \quad 2.30$$

$$A-4 \quad 3.25$$

2. Calculate the average air voids for the lot.

$$X = (x_1 + x_2 + x_3 + \dots x_n) / n$$

$$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$$

$$X = 3.57 \text{ percent}$$

3. Calculate the standard deviation S_n for the lot.

$$S_n = [(3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2] / (4-1)]^{1/2}$$

$$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$$

$$S_n = 1.12$$

4. Calculate the Lower Quality Index Q_L for the lot ($L=2.0$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (3.57 - 2.00) / 1.12$$

$$Q_L = 1.3992$$

5. Determine P_L by entering Table 1 with $Q_L = 1.40$ and $n = 4$

$$P_L = 97$$

6. Calculate the Upper Quality Index Q_U for the lot ($U = 5.0$)

$$Q_U = (U - X) / S_n$$

$$Q_U = (5.00 - 3.57) / 1.12$$

$$Q_U = 1.2702$$

7. Determine P_U by entering Table 1 with $Q_U = 1.27$ and $n = 4$
 $P_U = 93$

8. Calculate Air Voids PWL
 $PWL = (P_L + P_U) - 100$
 $PWL = (97 + 93) - 100 = 90$

TABLE 1. TABLE FOR ESTIMATING PERCENT OF LOT WITHIN LIMITS (PWL)

Percent Within Limits (PWL), P_L , and P_U	Positive Values of Q					
	n=3	n=4	n=5	n=6	n=7	n=8
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6121
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4716
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630
87	1.0597	1.1100	1.1173	1.1191	1.1199	1.1204
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015
83	0.9939	0.9900	0.9785	0.9715	0.9672	0.9643
82	0.9749	0.9600	0.9452	0.9367	0.9325	0.9281
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747

TABLE 1. TABLE FOR ESTIMATING PERCENT OF LOT WITHIN LIMITS (PWL)

Percent Within Limits (PWL), P_L , and P_U	Positive Values of Q					
	n=3	n=4	n=5	n=6	n=7	n=8
70	0.6787	0.6000	0.5719	0.5583	0.5504	0.5454
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592
66	0.5563	0.4800	0.4545	0.4424	0.4354	0.4310
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4031
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660
59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855
56	0.2164	0.1800	0.1688	0.1636	0.1613	0.1592
55	0.1806	0.1500	0.1408	0.1363	0.1338	0.1322
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0792
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264
50	0.0	0.0	0.0	0.0	0.0	0.0
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0792
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057
45	-0.1806	-0.1500	-0.1408	-0.1363	-0.1338	-0.1322
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1592
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391

Percent Within Limits (PWL), P_L , and P_U	Positive Values of Q					
	n=3	n=4	n=5	n=6	n=7	n=8
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4031
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4354	-0.4310
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877
31	0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164
30	-0.6787	-0.6000	-0.5719	-0.5583	-0.5504	-0.5454
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9325	-0.9281
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9672	-0.9643
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399
14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794
13	-1.0597	-1.1100	-1.1173	-1.1191	-1.1199	-1.1204
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075

Percent Within Limits (PWL), P_L , and P_U	Positive Values of Q					
	n=3	n=4	n=5	n=6	n=7	n=8
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4716
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053
1	-1.1541	-1.4700	-1.6714	-1.8008	-1.8888	-1.9520

END OF SECTION 110

SECTION 120 - NUCLEAR GAGES

120-01 TESTING. When the specifications provide for nuclear gage acceptance testing of material for Items P-152, P-154, P-208, and P-209, the testing shall be performed in accordance with this section. At each sampling location, the field density shall be determined in accordance with ASTM D 2922 using the Direct Transmission Method. The nuclear gage shall be calibrated in accordance with Annex A1. Calibration and operation of the gage shall be in accordance with the requirements of the manufacturer. The operator of the nuclear gage must show evidence of training and experience in the use of the instrument. The gage shall be standardized daily in accordance with ASTM D 2922, paragraph 8.

Use of ASTM D 2922 results in a wet unit weight, and when using this method, ASTM D 3017 shall be used to determine the moisture content of the material. The moisture gage shall be standardized daily in accordance with ASTM D 3017, paragraph 7.

The material shall be accepted on a lot basis. Each Lot shall be divided into eight (8) sub-lots when ASTM D 2922 is used.

120-02. When PWL concepts are incorporated, compaction shall continue until a PWL of 90 percent or more is achieved using the lower specification tolerance limits (L) below.

The percentage of material within specification limits (PWL) shall be determined in accordance with the procedures specified in Section 110 of the General Provisions.

The lower specification tolerance limit (L) for density shall be:

Spec. Item Number	Specification Tolerance (L) for Density, (percent of laboratory maximum)
Item P-152	90.5 for cohesive material, 95.5 for non-cohesive
Item P-154	95.5
Item P-208	97.0
Item P-209	97.0

If the PWL is less than 90 percent, the lot shall be reworked and re-compacted by the Contractor at the Contractor's expense. After reworking and re-compaction, the lot shall be re-sampled and retested. Retest results for the lot shall be reevaluated for acceptance. This procedure shall continue until the PWL is 90 percent or greater.

120-03 VERIFICATION TESTING. (For Items P-152 and P-154 only.) The Engineer will verify the maximum laboratory density of material placed in the field for each lot. A minimum of one test will be made for each lot of material at the site. The verification process will consist of; (1) compacting the material and determining the dry density and moisture-density in accordance with [ASTM D 698 for aircraft gross weights less than 60,000 pounds] [ASTM D 1557 for aircraft gross weights 60,000 pounds or more], and (2) comparing the result with the laboratory moisture-density curves for the material being placed. This verification process is commonly referred to as a "one-point Proctor". If the material does not conform to the existing moisture-density curves, the Engineer will establish the laboratory maximum density and optimum moisture content for the material in accordance with [ASTM D 698 for aircraft gross weights less than 60,000 pounds] [ASTM D 1557 for aircraft gross weights 60,000 pounds or more].

Additional verification tests will be made, if necessary, to properly classify all materials placed in the lot.

The percent compaction of each sampling location will be determined by dividing the field density of each sub-lot by the laboratory maximum density for the lot.

END OF SECTION 120

SECTION 130 - GENERAL PROVISIONS
CONSTRUCTION CONTRACT CLAUSES FOR
AIRPORT IMPROVEMENT PROGRAM

PART I - LABOR PROVISIONS -- FOR CONTRACTS

1. Each sponsor entering into a construction contract for an airport development project is required to insert in the contract the following provisions from 29 CFR 5.5 except that contracts for \$2,000 or less need not contain the provisions.

a. Minimum Wages.

(1) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week; and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to laborers or mechanics, subject to the provisions of subparagraph a.(4) below; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraph d. of this clause. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under a.(2) of this section) and the Davis-Bacon poster

(WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

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

(A) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(B) The classification is utilized in the area by the construction industry; and

(C) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(ii) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.).

(iii) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will

issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB number 1215-0140.)

(iv)The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraph (2) (ii) or (iii) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

- (3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (4) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB control number 1215-0140.).

b. Withholding. (FAA from Sponsor). The Federal Aviation Administration shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on

the site of work, all or part of the wages required by the contract, the FAA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

c. Payrolls and Basic Records.

- (1) Payrolls and basic records relating thereto will be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records will contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under a (4) of this clause that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB control numbers 1215-0140 and 1215-0017).
- (2) (i) The contractor will submit weekly for each week in which any contract work is performed a copy of all payrolls to the OWNER for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under c(1) above. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government

Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB control number 1215-0149.).

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

(A) That the payroll for the payroll period contains the information required to be maintained under c(1) above and that such information is correct and complete;

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

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

(iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph c.(2)(b) of this section.

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

(3) The contractor or subcontractor shall make the records required under paragraph c(1) of this section available for inspection, copying or transcription by authorized representatives of the FAA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

d. Apprentices and Trainees.

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

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (3) **EQUAL EMPLOYMENT OPPORTUNITY.** The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

e. Compliance With Copeland Act Requirements.

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

f. Subcontracts.

The contractor or subcontractor shall insert in any subcontracts the clauses contained in paragraphs a. through j. of this contract and such other clauses as the FAA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 FR 5.5.

g. Contract Termination: Debarment.

A breach of the contract clauses in paragraphs a. through j. of this clause and a. through e. of the 2nd clause below may be grounds for termination of the contract, and for the debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

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

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

i. Disputes Concerning Labor Standards.

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

j. Certification of Eligibility

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

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

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

2. The following clauses in paragraphs, a, b, c, d, and e below, required by the Contract Work Hours and Safety Standards Act, will also be inserted in full in AIP construction contracts in excess of \$2,000 in addition to the clauses required by 29 CFR 5.5(a) or 4.6 of Part 4 of Title 29. As used in the following, the term "laborers" and "mechanics" include watchmen and guards.

- a. **OVERTIME REQUIREMENTS.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of the laborers or mechanics shall require or permit any laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless each laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- b. **VIOLATION; LIABILITY FOR UNPAID WAGES, LIQUIDATED DAMAGES.** In the event of any violation of the clause set forth in paragraph a. above, the contractor or any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the U.S. (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph a. above, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of overtime wages required by the clause set forth in paragraph a. above.
- c. **WITHHOLDING FOR UNPAID WAGES AND LIQUIDATED DAMAGES.** The FAA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally -assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph b. above.
- d. **SUBCONTRACTS.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs a. through d. and also a clause requiring the

subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs a. through d.

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

- 3.** In addition to the provisions in 1 and 2 above for contracts in excess of \$2,000, the following is to be included in all contracts for work on airport development projects involving labor:

VETERAN'S PREFERENCE. In the employment of labor (except in executive, administrative and supervisory positions), preferences shall be given to veterans of the Vietnam era and disabled veterans. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

GENERAL DECISION

General Decision Number: GA170224 01/06/2017 GA224

Superseded General Decision Number: GA20160224

State: Georgia

Construction Type: Highway

Counties: Atkinson, Bacon, Ben Hill, Calhoun, Camden, Charlton, Clay, Clinch, Colquitt, Cook, Decatur, Early and Jeff Davis Counties in Georgia.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017

SUGA2014-046 10/03/2016

	Rates	Fringes
CARPENTER, Excludes Form Work....	\$ 15.00	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 14.74	0.00
FORM WORKER.....	\$ 11.45	0.00
HIGHWAY/PARKING LOT STRIPING:		
Operator (Striping Machine).....	\$ 11.30	0.00
INSTALLER - GUARDRAIL.....	\$ 14.34	0.00
IRONWORKER, REINFORCING.....	\$ 15.87	0.00
IRONWORKER, STRUCTURAL.....	\$ 15.36	0.00
LABORER: Grade Checker.....	\$ 11.70	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 12.31	0.00
LABORER: Pipelayer.....	\$ 12.91	0.00
LABORER: Asphalt (Includes Distributor, Raker, Screed, Shoveler, and Spreader).....	\$ 12.56	0.30
LABORER: Common or General, Includes Erosion Control.....	\$ 10.72	0.00
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 15.25	2.16

OPERATOR: Broom/Sweeper.....	\$ 11.25	0.00
OPERATOR: Bulldozer.....	\$ 13.47	0.00
OPERATOR: Compactor.....	\$ 12.82	2.29
OPERATOR: Crane.....	\$ 21.52	0.00
OPERATOR: Distributor.....	\$ 15.49	4.70
OPERATOR: Grader/Blade.....	\$ 16.42	3.79
OPERATOR: Hydroseeder.....	\$ 11.72	0.00
OPERATOR: Loader.....	\$ 13.71	0.00
OPERATOR: Mechanic.....	\$ 19.39	0.00
OPERATOR: Milling Machine Groundsman.....	\$ 17.82	0.00
OPERATOR: Milling Machine.....	\$ 19.87	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 14.42	0.00
OPERATOR: Piledriver.....	\$ 20.34	2.86
OPERATOR: Roller.....	\$ 11.94	0.00
OPERATOR: Scraper.....	\$ 11.30	0.00

OPERATOR: Screed.....	\$ 13.98	0.00
TRAFFIC CONTROL: Flagger.....	\$ 11.59	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 12.37	0.60
TRUCK DRIVER: Dump Truck.....	\$ 12.86	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 15.22	0.00
TRUCK DRIVER: Hydroseeder Truck.....	\$ 11.23	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 16.40	0.00
TRUCK DRIVER: Pickup Truck.....	\$ 17.16	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.81	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 16.99	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any

solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

END OF SECTION 130

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SPECIAL PROVISIONS

These Special Provisions form a part of the Contract Documents as indicated hereafter.

1. General

A Pre-construction Conference will be scheduled by the Owner after award of the Contract. The successful bidder will be required to have key personnel from their staff and major subcontractors at this meeting. Please refer to Section 80 of the General Provisions for details.

2. Scope of Work

This project consists crack sealing and remarking of Runways 5-23, 15-33, and parallel taxiway at the Cook County Airport, Adel, Georgia. The contract time for this project has been set at **60** calendar days.

3. Liquidated Damages

Time is of the essence in the completion of this project and there will be, on the part of the Owner, substantial monetary damage in the event that the Contractor should fail to complete the work within the time fixed for completion in the Contract, or within the time to which such completion may have been extended. The amounts listed below are substituted for the schedule of Liquidated Damages outlined in Section 108.08 of the GDOT's Standard Specifications for Construction of Transportation Systems, and are hereby made a part of these Contract Documents.

Liquidated Damages in the amount of **Five Hundred Dollars (\$500.00)** will be deducted and retained out of the monies which may become due the Contractor for every day that the time of work exceeds **60 calendar days**, or as may be extended beyond 60 calendar days by mutual agreement as provided in these Contract Documents.

4. Sequence of Construction

The following sequence of construction activities is presented as a guide for the Contractor in the preparing of work schedules. The Contractor will be required to coordinate his work so that all work on or about the aircraft operational areas does not interfere with airport traffic when the airport is open or represent safety hazards. It shall

be the responsibility of the Contractor to coordinate schedules to ensure that the project will be completed within the contract time allowed. The Engineer shall have final approval of such coordination and construction sequencing. ~~Planned sequence of construction will be:~~

- ~~a. Submit shop drawings, obtain permits, etc.~~
- ~~b. Implement Safety Plan features~~
- ~~c. Implement Erosion Control Measures~~
- ~~d. Perform necessary Clearing & Grubbing~~
- ~~e. Remove Pavement existing Apron and Taxilane~~
- ~~f. Remove Underground Storage Tank~~
- ~~g. Install Drainage Structures and Water Lines~~
- ~~h. Run new Utility Lines~~
- ~~i. Perform final earthwork and grading for Apron Expansion, Taxilanes, and Associated Work~~
- ~~j. Construct Base for Apron Expansion, Taxilanes, and Associated Work~~
- ~~k. Pave Apron Expansion, Taxilanes, and Associated Work~~
- ~~l. Place Airfield Markings on Apron and Taxilanes~~
- ~~m. Cleanup and restore disturbed areas~~
- ~~n. Remove safety barricades~~
- ~~o. Remove erosion control features when adequate ground cover is established~~

Contractor may submit a different sequence to the Engineer prior to start of work. Allow three business days for review.

5. Progress Schedule

The Contractor shall furnish the Engineer, for approval, a Progress Schedule immediately following the receipt of the Notice to Proceed. Unless otherwise specified, the Contractor may use any industry acceptable critical path schedule as a basis for establishing the controlling items of work and as a check on the progress of the work (e.g. Microsoft Project, Primavera, Suretrack).

Approval of the Progress Schedule shall not be construed to imply approval of any particular method or sequence of construction or to relieve the Contractor of providing sufficient materials, equipment, and labor to guarantee the completion of the Project in

accordance with the Plans, Specifications, General Provisions, and Special Provisions within the time set forth in the Proposal. Contract Time as shown in the Proposal is the allowable time. The Contractor's proposed Progress Schedule may indicate a completion date in advance of the Contract Specified Completion Date; however, the Owner will not be liable in any way for the Contractor's failure to complete the project prior to the Contract Specified Completion Date.

6. Project Area Access

The Contractor and all sub-contractors are required to use the access and haul routes as shown on the plans unless otherwise directed or approved by the Engineer. The Contractor shall take all necessary measures as may be required to ensure that no unauthorized personnel gain entry onto the airport property.

It shall be the Contractor's responsibility to provide barricades, flagmen, temporary fencing and security as required, and to take all necessary precautions to allow only authorized vehicles and personnel into the construction area.

Upon completion of the work as set forth in these plans and specifications, the Contractor will be required to restore at his own expense any areas damaged during construction, including any pavement not scheduled for demolition, to its original condition, or as directed by the Engineer. No separate pay item will be authorized for establishing, maintaining, securing and/or restoring the access to and from the project site.

Communication with airport personnel is critical. To maintain safe and orderly airport operations during construction, the Contractor shall provide designated airport or operations personnel with progress reports, safety related information, and/or time critical construction and traffic advisories, on a **daily** basis, unless a more frequent interval is dictated by circumstances.

7. Mobilization and 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. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas of the airport with respect to his own

operations and the operations of all his subcontractors. 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.

With respect to his own operations and the operations of all his 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.

When the Contract requires the maintenance of vehicular traffic on 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 such road, street, or highway open to all traffic and shall provide such maintenance of traffic routing or devices as may be required to accommodate traffic. The Contractor shall furnish erect, and maintain barricades, warning signs, flagmen, and other traffic control devices in reasonable conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office), unless otherwise specified herein. 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.

8. Material Submittals

The Contractor shall submit to the Engineer and have approved the materials certificates, equipment specifications, etc., before any related work item is performed as stated in the GDOT Standard Specifications and attached Technical Specifications. The Contractor is urged to make these submittals as soon as possible after award of the contract is made. The Contractor shall be responsible for all requirements of the Buy American Act.

9. General Guarantee

Neither the final certificate of payment nor any provision in the contract documents nor

partial or entire use or occupancy of the premises by the OWNER shall constitute an acceptance of work not done in accordance with the contract documents or relieve the contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting there from which shall appear within a period of one year from date of final acceptance of the work. The Owner will give notice of observed defects with reasonable promptness.

10. Operational Safety during Construction

Aviation safety is the primary consideration at airports, especially during construction. The Contractor shall obtain a copy of, and be familiar with, FAA Advisory Circular 150/5370-2 (Latest Edition), "Operational Safety on Airports during Construction." This document, along with the safety requirements highlighted below, shall be included in the contractor's construction procedures.

Special Safety Requirements during Construction

- a. Runway Ends. Any construction activity (not exceeding 20 feet in height) occurring within 600 feet of an open, active runway end may require a temporary displaced threshold to avoid penetrations to the 20:1 approach slope. Temporary displaced threshold location will require approval from the Engineer.
- b. Runway Centerline. Construction activities shall not be permitted within 75 feet of the runway centerline while runway is open. Work within 75 feet of the Runway centerline will require closure or temporary threshold displacement. Closure or displacement will require approval from the engineer.
- c. Taxiways and Aprons. Normally, construction activity set-back lines should be located at a distance of 50 feet from the centerline of an active taxiway or edge of an aircraft parking apron. However, construction activity may be permitted up to the edges of the taxiway and aprons in use provided that the activity is first coordinated with the Engineer; NOTAM's are issued; marking and lighting provisions are implemented; and it is determined the height of equipment and materials is safely below any part of the aircraft using the airport operations areas which might overhang the areas of construction activity. Associated

taxiway shall be closed during any work within 50 feet of the centerline.

- d. Contractor shall keep active airfield pavement (runway, taxiways, and aprons) clear of all debris, stones and other materials (FOD) during construction. After work operations cease for each work shift, all construction equipment and materials shall be stored in fenced Staging Area, and not left on or within runway and taxiway safety areas as indicated on the plans. All active pavement shall be cleaned and inspected by the contractors' superintendent prior to release of work crews after each shift of work.
- e. Stockpiled material shall be constrained in a manner to prevent movement resulting from aircraft prop wash or wind conditions in excess of 10 knots.
- f. Open flames, welding or torch-cutting operations are prohibited unless adequate fire and safety precautions have been taken and proposed procedures approved by the Engineer.
- g. Contractor shall provide barricades across pavement to isolate construction activities from aircraft operating areas at locations as determined by the Engineer. All construction barricades shall be inspected by the contractor's superintendent prior to release of work crews after each work shift to insure barricades are properly placed and, where appropriate, lighted for non-work hours
- h. Prior to issue of the Notice to Proceed, the Contractor shall furnish the Owner with a list of all personnel to be assigned to the project and their responsibilities while on the airport operations area (AOA) and the name of superintendent responsible for project security.
- i. **The use of explosives will not be permitted unless the Contractor first receives written permission of the Owner authorizing their use.**
- j. For all equipment over 20 feet in height, the Engineer must be notified and must approve usage of this equipment at specified times.

No separate payment shall be made for the safety and security requirements stated above. All costs necessary to provide these items or services shall be included in other bid items quoted in the bid proposal.

11. Site Preparation.

Any soils, grassed areas, pavement or other surfaces on the site, or on the access routes to the site, that have been disturbed or damaged during construction shall be returned to their original or better condition prior to job completion.

12. Removal of Existing Structures

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 Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the Contract.

13. Units of Measurement.

All units of measurements used in these Contract Documents shall be in U.S. Standard units, (i.e.), inches, feet, yards, acres, pounds, U.S. tons, gallons, etc., and extrapolations thereof. References to metric measurements shall be ignored unless specifically identified as the sole unit of measurement. See General Provisions, Section 90 for greater detail.

14. Clean Air and Water Pollution Control Requirements for all Construction Contracts and Subcontract Exceeding \$100,000.

The Contractor agrees:

- a. That any facility to be used in the performance of the contract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities.
- b. To comply with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations issued thereunder.

- c. That as a condition for award of a contract, they will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be utilized for performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities.
- d. To include in any subcontract which exceeds \$100,000 the requirements of a, b, and c above.
- e. To comply with all State and Local regulations with regards to erosion, sedimentation, and pollution control requirements.

15. Material Testing

All materials will be inspected, tested, and approved by the Engineer before incorporation into the work. Samples will be taken by a qualified representative of the Engineer or GDOT. Unless otherwise designated, tests will be made by and at the expense of the GDOT and in accordance with methods of AASHTO, ASTM, or the published Specifications of any other designated organization that are current on the date of advertisements for bids. Copies of all tests will be furnished to the Contractor's representative at his request. Sampling and testing by the GDOT will be performed in accordance with the *Sampling, Testing and Inspection Manual*.

16. Conflicting or Missing Information or Specifications

Should conflicting requirements, specifications, interpretations or contract language be discovered in these Contract Documents, the Engineer shall have the sole authority to determine the appropriate course of action or interpretation. Such decision will generally be the one most beneficial to the Owner, and/or that which is generally accepted as the industry standard.

Should a specification or requirement be partially or wholly omitted from these Contract Documents, the most applicable specific standard or specification from among FAA's "Standards for Specifying Construction on Airports", A/C 150/5370-10 (latest edition), or the GDOT "Standard Specifications for Construction of Transportation Systems, 2013 Edition"; and Supplemental Specifications, latest Edition; shall become the basis for the Engineer to determine the proper course of action.

END OF SPECIAL PROVISION

Item M-101 Mobilization

DESCRIPTION

101-1.1 General. The work specified in this item consists of preparatory work and operations to mobilize for beginning work on the project. Mobilization shall include, but not be limited to, those operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, and for the establishment of temporary offices, buildings, utilities, safety equipment and first aid supplies, sanitary and other facilities, as required by these specifications and State and local laws and regulations. The costs of bonds and any required insurance, and all other work and operations that shall be performed or costs incurred before beginning work on the various Items on the Project site.

BASIS OF PAYMENT

101-5.1 General. The work and incidental costs covered under this item shall be paid for at the Contract lump sum price for Mobilization.

101-5.2 Partial Payments. Partial payments will be made in accordance with the following:

1. The first regular payment is 50 percent of the amount bid for mobilization, or 3 percent of the original Contract amount, whichever is less.
2. When 5 percent of the original contract amount is earned, the next progress payment is 100 percent of the amount bid for mobilization, or 3 percent of the total original contract amount, whichever is less, minus any previous payments.
3. Any amount bid for mobilization in excess of 3 percent of the original Contract amount is paid when work on the Project is complete.
4. The total sum of the payments shall not exceed the original Contract amount bid for this item.

Payment includes all costs for mobilization, demobilization, and remobilization as required to complete the work.

Payment will be made under:

Item M-101-5.1: Mobilization, per lump sum

END ITEM M-101

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**SUPPLEMENTAL FOR TECHNICAL SPECIFICATION P-101
SURFACE PREPARATION**

1. P-101-3.1 **REMOVAL OF EXISTING PAVEMENT. Delete** entire section.
2. P-101-3.2 **PREPARATION OF JOINTS AND CRACKS. Delete** entire section.
3. P-101-3.3 **REMOVAL OF PAINT AND RUBBER. Revise** 1st sentence to read: “All paint as identified in the Plans shall be removed from the surface of the existing pavement.”
4. P-101-3.3 **REMOVAL OF PAINT AND RUBBER. Revise** 2nd sentence to read: “Water blasting shall be the only acceptable means of removing paint and/or rubber and shall not cause major damage to the pavement.”
5. P-101-3.3 **REMOVAL OF PAINT AND RUBBER. Revise** 3rd sentence to read: “Paint removal shall not cause major damage to the pavement.”
6. P-101-3.3 **REMOVAL OF PAINT AND RUBBER. Delete** 5th sentence.
7. P-101.3.3 **REMOVAL OF PAINT AND RUBBER. Revised** 6th sentence to read: “All wastes shall be disposed of off-site by the contractor.”
8. P-101-3.3 **REMOVAL OF PAINT AND RUBBER. Rename** section to 101-3.1
9. P-101-3.4 **CONCRETE SPALL OR FAILED ASPHALTIC CONCRETE PAVEMENT REPAIR. Delete** entire section.
10. P-101-3.5 **COLD MILLING. Delete** entire section.
11. P-101-3.6 **PREPARATION OF ASPHALT PAVEMENT SURFACES. Delete** entire section.
12. P-101-3.7 **MAINTENANCE. Delete** entire section.
13. P-101-3.8 **PREPARATION OF JOINTS IN RIGID PAVEMENT. Delete** entire section.
14. P-101-3.9 **PREPARATION OF CRACKS IN FLEXIBLE PAVEMENT. Delete** entire section.
15. P-101-4.1 **MEASUREMENT. Delete** sections 101-4.1, 101-4.2, 101-4.4, and 101-4.5.
16. P-101-4.3 **PAVENT AND RUBBER REMOVAL. Rename** section to 101-4.1.
17. P-101-5.1 **BASIS OF PAYMENT. Delete** 2nd Paragraph and **Replace** with:
“Payment will be made under:
Item P-101-5.1 Paint and Rubber Removal -- per square foot”

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TECHNICAL SPECIFICATION P-101 SURFACE PREPARATION

DESCRIPTION

101-1.1. This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable drawings.

EQUIPMENT

101-2.1. All equipment shall be specified here and in the following paragraphs or approved by the Engineer. The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1. REMOVAL OF EXISTING PAVEMENT

a. Concrete Pavement: The existing concrete pavement to be removed shall be freed from the pavement to remain by sawing through the complete depth of the slab one foot (30 cm) inside the perimeter of the final removal limits or outside the dowels, whichever is greater when the limits of removal are located on the joints. The pavement between the perimeter of the pavement removal and the saw cut shall be carefully broken up and removed using hand-held jackhammers, weighing 30 pounds (14 kg) or less, or other light-duty equipment which will not cause distress in the pavement which is to remain in place. The Contractor shall have the option of sawing through the dowels at the joint, removing the pavement and installing new dowels. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, then the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods suitable to the Engineer which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size designated by the Engineer. The Contractor's removal operation shall not cause damage to cables, utility ducts, pipelines, or drainage structures under the pavement. Concrete slabs that are damaged by under breaking shall be removed. Any damage shall be repaired at the Contractor's expense.

b. Asphaltic Concrete Pavement: Asphalt concrete pavement to be removed shall be cut to the full depth of the bituminous material around the perimeter of the area to be removed. The pavement shall be removed so the joint for each layer of pavement replacement is offset 1 foot (30 cm) from the joint in the

preceding layer. This does not apply if the removed pavement is to be replaced with concrete or soil. If the material is to be wasted on the airport site, it shall be broken to a maximum size of 1 inch (25 mm).

101-3.2. PREPARATION OF JOINTS AND CRACKS. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists treat the specific area with a concentrated solution of a water-based herbicide approved by the Engineer. Fill all cracks, ignoring hairline cracks (< 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. Wider cracks (over 1-1/2 inch wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below. Any excess joint or crack sealer on the surface of the pavement shall also be removed from the pavement surface.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4	100
No. 8	90-100
No. 16	65-90
No. 30	40-60
No. 50	25-42
No. 100	15-30
No. 200	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the Engineer.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled within 0 to 1/8 inches (0-3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the

pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3. REMOVAL OF PAINT AND RUBBER. All paint and rubber over 1 foot (30 cm) wide that will affect the bond of the new overlay shall be removed from the surface of the existing pavement. Chemicals, high-pressure water, heater scarifier (asphaltic concrete only), cold milling, or sandblasting may be used. Any methods used shall not cause major damage to the pavement. Major damage is defined as changing the properties of the pavement or removing pavement over 1/8 inch (3 mm) deep. If chemicals are used, they shall comply with the state's environmental protection regulations. No material shall be deposited on the runway shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

101-3.4. CONCRETE SPALL OR FAILED ASPHALTIC CONCRETE PAVEMENT REPAIR.

a. Repair of Concrete Spalls in Areas to be overlaid with Asphalt: The Contractors shall repair all spalled concrete as shown on the plans or as directed by the Engineer. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphaltic concrete with a minimum Marshall stability of 1,200 lbs (544 kg) and maximum flow of 20 (units of 0.01 in). The material shall be compacted with equipment approved by the Engineer until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphaltic Concrete Pavement Repair: The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. The base course and subbase shall be replaced if it has been infiltrated with clay, silt, or other material affecting the load-bearing capacity. Materials and methods of construction shall comply with the other applicable sections of this specification.

101-3.5: Cold Milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a finished surface that provides a good bond to the new overlay. The milling machine or grinder shall operate without tearing or gouging the under laying surface. The milling machine or grinder shall be equipped with automatic grade and slope controls. All millings shall be

removed and disposed off Airport property, unless otherwise specified. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material that was removed with new material at no additional cost to the Owner.

a. Patching: The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The Engineer shall layout the area to be milled with a straightedge in increments of 1 foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall not be included in the measurement for payment.

b. Profiling, Grade Correction, or Surface Correction: The milling machine shall have a minimum width of 10 feet(3 m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade and tolerances specified. The machine shall cut vertical edges. A positive method of dust control shall be provided. The machine shall have the ability to remove the millings or cuttings from the pavement and load them into a truck.

b. Clean-up: The Contractor shall sweep the milled surface daily and immediately after the milling until all residual aggregate and fines are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove any remaining aggregate or fines.

101-3.6. Preparation of asphalt pavement surfaces. Existing asphalt pavements indicated to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt concrete similar to that of the existing pavement in accordance with paragraph 101-3.4.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scraping or by scrubbing with a detergent, then wash thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment by sweeping, flushing well with water leaving no standing water, or a combination of both, so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the Engineer. The

surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face.

Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry. Allow sufficient time to dry out joints prior to sealing.

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Clean joints by sandblasting, or other method approved by the Engineer, on each joint face with nozzle held at an angle and not more than three inches (75 mm) from face. Following sandblasting, clean joints with air free of oil and water. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.9 Preparation of Cracks in Flexible Pavement.

101-3.9.1 Preparation of Crack. Widen crack with router by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, joints will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Sealant. Existing sealants will be removed by routing. Following routing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

METHOD OF MEASUREMENT

101-4.1. MEASUREMENT.

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards (square meters) removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment.

101-4.2 Joint and crack repair. The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint.

101-4.3 Paint and rubber removal. The unit of measurement for paint and rubber removal shall be the square foot (meter).

101-4.4 Spalled and failed asphaltic concrete pavement repair:

a. The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the Engineer and the Contractor.

b. The unit of measure for failed asphaltic concrete pavement shall be square feet (square meter).

101-4.5 Cold milling. The unit of measure for cold milling shall be 1 inch of milling per square yard (square meter). The location and average depth of the cold milling shall be determined and agreed to by the Engineer and the Contractor prior to beginning the work. If the initial cut doesn't correct the condition and surface correction is required, the Contractor shall re-mill the area and will be paid only once for the total depth of milling.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1	Pavement Removal
Item P 101-5.2	Joint and Crack Repair
Item P 101-5.3	Paint and Rubber Removal
Item P-101-5.4	Spalled and Failed Asphaltic Concrete Pavement Repair: (1) Concrete Spall Repair (2) Failed asphaltic concrete pavement:
Item P-101-5.5	Cold Milling

END OF SECTION P-101

Item P-605 Joint Sealants for Concrete Pavements

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints and cracks in rigid pavements.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of **ASTM D6690, Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.**

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant. The material shall have a water absorption of not more than 5% when tested in accordance with ASTM C509. The backer-rod material shall be $25\% \pm 5\%$ larger in diameter than the nominal width of the crack.

605-2.3 Backup materials. Provide backup material that is a compressible, nonshrinking, nonstaining, nonabsorbing material, nonreactive with the joint sealant. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The material shall have a water absorption of not more than 5% of the sample weight when tested in accordance with ASTM C509. The backup material shall be $25 \pm 5\%$ larger in diameter than the nominal width of the crack.

605-2.4 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, nonshrinkable, nonabsorbing, nonstaining, and nonreacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **ten (10)** days prior to use on the project.

a. Waterblasting equipment. Include with the waterblasting equipment a trailer-mounted water tank, pumps, high-pressure hose, wand with safety release cutoff control, nozzle, and auxiliary water resupply equipment. Provide water tank and auxiliary resupply equipment of sufficient capacity to permit continuous operations. The nozzle shall have an adjustable guide that will hold the nozzle aligned with the joint approximately one inch (25 mm) above the pavement surface. Adjust the height, angle of inclination and the size of the nozzle as necessary to obtain satisfactory results. A pressure gauge mounted at the pump shall show at all times the pressure in psi (kPa) at which the equipment is operating.

b. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces.

c. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

605-3.3 Preparation of joints.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be waterblasted clean. Waterblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Back-up material. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a back-up material to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backup material is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-breaker separating tape to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the Engineer before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/8 inch (3 mm) \pm 1/16 inch (2 mm) below the pavement surface. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped

air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the Contracting Officer. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing material shall be measured by the **linear foot (meter)** of sealant in place, completed, and accepted.

BASIS OF PAYMENT

605-5.1 Payment for joint sealing material shall be made at the contract unit price per linear foot (meter). The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-605-5.1	Crack Sealing, per linear foot (meter)
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TESTING REQUIREMENTS

ASTM D412	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension
ASTM C509	Standard Specification for Elastomeric Cellular Preformed Gasket and Sealing Material
ASTM D1644	Standard Test Methods for Nonvolatile Content of Varnishes

MATERIAL REQUIREMENTS

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)

ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END ITEM P-605

**SUPPLEMENTAL TO TECHNICAL SPECIFICATION P-620
RUNWAY AND TAXIWAY MARKING**

1. 620-2 **MATERIALS**, **Add** a fourth section after 620-2.3 to read as follows:

"620-2.4 Microbicide. All Waterborne paint shall contain a microbicide that provides microbial efficacy for a period of no less than 3 years. The microbicide shall be blended homogeneously with the paint under high speed dispersion during production by the supplier/manufacturer. The final homogenous blend of microbicide treated paint shall conform to the same viscosity stability standards as specified in TT-P-1952 F.

- a. Dow (Formerly Rohm and Hass) Rocima 63 microbicide (or other approved equivalent) shall be added at a rate of 10 pounds per 100 gallons of paint.
 - b. Other products may be available that meet or exceed these specifications."

END OF SUPPLEMENTAL

Item P-620 Runway and Taxiway Marking

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Engineer. The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

MATERIALS

620-2.1 Materials acceptance. The Contractor shall furnish manufacturer’s certified test reports for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. The reports can be used for material acceptance or the Engineer may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the Engineer upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers 55 gallons or smaller for inspection by the Engineer. Material shall not be loaded into the equipment until inspected by the Engineer.

620-2.2 Marking materials. Paint shall be waterborne in accordance with the requirements of paragraph 620-2.2.a. Paint shall be furnished in 37925, 33538, and 37038 colors in accordance with Federal Standard No. 595.

- a. Waterborne.** Paint shall meet the requirements of Federal Specification TT-P-1952E, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

620-2.3 Reflective media. Glass beads shall meet the requirements for **Type III**. Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

CONSTRUCTION METHODS

620-3.1 Weather limitations. The painting shall be performed only when the surface is dry and when the surface temperature is at least 45°F (7°C) and rising and the pavement surface temperature is at least 5°F (2.7°C) above the dew point or meets the manufacturer’s recommendations. Markings shall not be applied when the pavement temperature is greater than 130°F (55°C). Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless-type marking machine suitable for application of traffic paint. It shall produce an even and uniform film thickness at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray.

620-3.3 Preparation of surface. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material that would reduce the bond between the paint

and the pavement. The area to be painted shall be cleaned by waterblasting or by other methods as required to remove all contaminants minimizing damage to the pavement surface. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the Engineer. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

At least 24 hours prior to remarking existing markings, loose existing markings must be removed such that 100% of the loose existing markings are removed. After removal, the surface shall be cleaned of all residue or debris either with sweeping or blowing with compressed air or both.

Prior to the application of any markings, the Contractor shall certify in writing that the surface has been prepared in accordance with the paint manufacturer's requirements, that the application equipment is appropriate for the type of marking paint and that environmental conditions are appropriate for the material being applied. This certification along with a copy of the paint manufacturer's surface preparation and application requirements must be submitted and approved by the Engineer prior to the initial application of markings.

620-3.4 Layout of markings. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 Application. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the Engineer. The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacings shall be within the following tolerances:

Dimension and Spacing	Tolerance
36 inch (910 mm) or less	±1/2 inch (12 mm)
greater than 36 inch to 6 feet (910 mm to 1.85 m)	±1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	±2 inch (50 mm)
greater than 60 feet (18.3 m)	±3 inch (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted. A period of **48 hours** shall elapse between placement of a bituminous surface course or seal coat and application of the paint.

Prior to the initial application of markings, the Contractor shall certify in writing that the surface has been prepared in accordance with the paint manufacturer's requirements, that the application equipment is appropriate for the marking paint and that environmental conditions are appropriate for the material being applied. This certification along with a copy of the paint manufacturer's application and surface preparation requirements must be submitted to the Engineer prior to the initial application of markings.

620-3.6 Test strip. Prior to the full application of airfield markings, the Contractor shall produce a test strip in the presence of the Engineer. The test strip shall include the application of a minimum of 5 gallons (4 liters) of paint and application of 35 lbs (15.9 kg) of Type I/50 lbs (22.7 kg) of Type III glass beads. The test strip shall be used to establish thickness/darkness standard for all markings. The test strip shall cover no more than the maximum area prescribed in Table 1 (e.g., for 5 gallons (19 liters) of waterborne paint shall cover no more than 575 square feet (53.4 m²).

Table 1. Application Rates For Paint And Glass Beads
(See Note regarding Red and Pink Paint)

Paint Type	Paint Square feet per gallon, ft ² /gal (Sq m per liter, m ² /l)	Glass Beads, Type I, Gradation A Pounds per gallon of paint-lb/gal (Km per liter of paint-kg/l)	Glass Beads, Type III Pounds per gallon of paint-lb/gal (Km per liter of paint-kg/l)	Glass Beads, Type IV Pounds per gallon of paint-lb/gal (Km per liter of paint-kg/l)
Waterborne Type I or II	115 ft ² /gal max (2.8 m ² /l)	-	10 lb/gal min (1.2 kg/l)	-

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment should be performed.

All emptied containers shall be returned to the paint storage area for checking by the Engineer. The containers shall not be removed from the airport or destroyed until authorized by the Engineer.

620-3.8 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose or unadhered reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the Engineer. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and Federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1 The quantity of runway and taxiway markings to be paid for shall be the number of square feet (square meters) of painting performed in accordance with the specifications and accepted by the Engineer.

BASIS OF PAYMENT

620-5.1 Payment shall be made at the respective contract price per square foot (square meter) for runway and taxiway painting and reflective media. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item. Payment will be made under:

- Item P-620-5.1-1 Runway and Taxiway Marking, Type II, White, incl. Type III Glass Beads and Microbiside - per square foot (square meter)
- Item P-620-5.1-2 Runway and Taxiway Marking, Type II, Yellow, incl. Type III Glass Beads and Microbiside - per square foot (square meter)

Item P-620-5.1-3 Runway and Taxiway Marking, Type II, Black, incl. Microbiside - per square foot (square meter)

TESTING REQUIREMENTS

ASTM C371	Standard Test Method for Wire-Cloth Sieve Analysis of Nonplastic Ceramic Powders
ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
ASTM D711	Standard Test Method for No-Pick-Up Time of Traffic Paint
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

MATERIAL REQUIREMENTS

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
29 CFR Part 1910.1200	Hazard Communication
FED SPEC TT-B-1325D	Beads (Glass Spheres) Retro-Reflective

American Association of State Highway and Transportation Officials (AASHTO) M247
Standard Specification for Glass Beads Used in Pavement Markings

FED SPEC TT-P-1952E
Paint, Traffic and Airfield Marking, Waterborne

Commercial Item Description A-A-2886B
Paint, Traffic, Solvent Based

FED STD 595 Colors used in Government Procurement

AC 150/5340-1 Standards for Airport Markings

END OF ITEM P-620